CRWMS/M&O

Design Analysis Cover Sheet

Complete only applicable items.

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Page: 1

Of: 52

2. DESIGN ANALYSIS TITLE

Thermal Evaluation of the Conceptual 44 BWR UCF Tube Basket Design Disposal Container (SCP: N/A)

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MGDS-WPD

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14. REMARKS

This document has one TBV number controlled in accordance with NLP-3-15: TBV-214-WPD.

Design Analysis Revision Record

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1.

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2. DESIGN ANALYSIS TITLE

Thermal Evaluation of the Conceptual 44 BWR UCF Tube Basket Design Disposal Container

3. DOCUMENT IDENTIFIER (Including Rev. No.)

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1. Purpose

This analysis is prepared by the Mined Geologic Disposal System (MGDS) Waste Package Development Department (WPDD) as specified in the Waste Package Implementation Plan (pp. 4-8, 4-11, 4-24, 5-1, and 5-13; Ref. 5.10) and Waste Package Plan (pp. 3-15, 3-17, and 3-24; Ref. 5.9). The design data request addressed herein is:

- 1) Characterize the conceptual 44 boiling water reactor (BWR) uncanistered fuel (UCF) waste package (WP) to show that the design is feasible for use in the MGDS environment.

The purpose of this analysis is to respond to a concern that the long-term disposal thermal issues for the UCF waste package do not preclude UCF waste package compatibility with the MGDS. The objective of this analysis is to provide thermal parameter information for the conceptual UCF WP design under nominal MGDS repository conditions. The results are intended to show that the design has a reasonable chance to meet the MGDS design requirements for normal MGDS operation and to provide the required guidance to determining the major design issues for future design efforts. Future design efforts will focus on UCF design changes as further design and operations information becomes available.

2. Quality Assurance

The Quality Assurance (QA) program does apply to this analysis. The information in this analysis concerning disposal long-term thermal parameters for the conceptual UCF WP will be used as a guide as to the possible requirements which might be used in the final UCF WP design. The performance of the UCF internals will affect the proper function of the waste package and the waste package has been identified as a MGDS Q-List item important to safety (p. 5, Ref. 5.4). The waste package is on the Q-List by direct inclusion by DOE without conducting a QAP-2-3 evaluation. The work performed for this analysis is covered by reference 5.2, Perform Criticality, Thermal, Structural, and Shielding Analysis, which is part of the WPDD QAP-2-0 Work Control evaluation documents. This QAP-2-0 evaluation determined such activities are subject to Quality Assurance Requirements and Description (QARD) (Ref. 5.3) requirements. Applicable procedural controls are listed in the evaluation.

All design inputs which are identified in this document are for pre-Title II (conceptual or preliminary) designs; some or all of these design inputs will require subsequent qualification (or superseding inputs) as the waste package design proceeds. For design documents subject to the QARD requirements, unqualified design inputs must be considered as TBV (to be verified) items subject to tracking, in accordance with applicable procedures. The design inputs identified and documented in Section 4 have been assigned the single tracking number TBV-214-WPD, to meet tracking requirements.

3. Method

The analytical method to be employed is Finite Element Analysis (FEA). The analysis will build upon the Emplacement Scale Thermal Evaluations (Ref. 5.13) and the thermal conductivity analysis used in reference 5.40, by using the same method for SNF thermal modeling and the results for the WP surface temperatures from the three-dimensional emplacement scale model. Thus, the BWR UCF internals will be modeled with the spent nuclear fuel (SNF) approximated by a homogeneous material property region based upon the GE-7 BWR-5 fuel assembly data (pp. 2A-21, 2A-22 Ref. 5.12 and p. 26, Ref. 5.39) and the SNF effective thermal conductivity values provided in reference 5.40. Peak SNF cladding temperatures will also be determined using the Wootton-Epstein Correlation (Ref. 5.14) for comparison purposes. The calculation shall be performed as a transient analysis to evaluate the first 1000 years of proposed repository operation.

4. Design Inputs

All design inputs are for pre-Title II designs; some or all of these design inputs will require subsequent qualification (or superseding inputs) as the waste package design proceeds. The design inputs identified and documented in Section 4 have been assigned the single tracking number TBV-214-WPD, to meet tracking requirements in accordance with applicable procedures.

4.1 Design Parameters

Tables 4.1-1 and 4.1-2 list the material and thermal properties of density, emissivity, thermal conductivity, and specific heat of stainless steel 316 (see assumption 4.3.23). The density of 316 stainless steel provided in Table 4.1-1 was taken from Table 17 of the Metals Handbook (p. 423, Ref. 5.18). The emissivity provided in Table 4.1-1 was taken from Table 4.3.2 of Marks' Handbook (p. 4-68, Ref. 5.17) and is about average for heated stainless steel 316.

Table 4.1-1. Material Properties of Stainless Steel 316 (Refs. 5.17 and 5.18)

	Density	Emissivity
Stainless Steel 316	8000.0 kg/m ³	0.60

Table 4.1-2 lists the thermal properties of stainless steel 316. Values for thermal conductivity and thermal diffusivity of stainless steel 316 (Cr-Ni-Mo) were taken from Table I-4.0, Appendix I of the 1986 ASME Boiler and Pressure Vessel Code (p. 97, Ref. 5.15) and are converted here to conductivity and specific heat in SI units. The conversion of thermal diffusivity (defined in equation 4.1-1 below) to specific heat requires the density listed in Table 4.1-1.

$$\text{Thermal Diffusivity}(\text{ft}^2/\text{hr}) = \frac{\text{Thermal Conductivity}(\text{Btu}/\text{hr ft}^\circ\text{F})}{\text{Density}(\text{lb}/\text{ft}^3) \times \text{Specific Heat}(\text{Btu}/\text{lb}^\circ\text{F})} \quad (\text{Equation 4.1-1})$$

Table 4.1-2. Thermal Properties of Stainless Steel 316 (Ref. 5.15)

Temperature		Thermal Conductivity (Btu/hr-ft-°F)	Thermal Diffusivity (ft²/hr)	Thermal Conductivity (W/m-K)	Specific Heat (J/kg-K)
°F	°C				
70	21.11	7.7	0.134	13.33	481.68
100	37.78	7.9	0.136	13.67	486.92
150	65.56	8.2	0.138	14.19	498.09
200	93.33	8.4	0.141	14.54	499.38
250	121.11	8.7	0.143	15.06	509.98
300	148.89	9.0	0.145	15.58	520.29
350	176.67	9.2	0.148	15.92	521.07
400	204.44	9.5	0.151	16.44	527.38
450	232.22	9.8	0.153	16.96	536.92
500	260.00	10.0	0.156	17.31	537.34
550	287.78	10.3	0.159	17.83	543.02
600	315.56	10.5	0.162	18.17	543.31
650	343.33	10.7	0.164	18.52	546.91
700	371.11	11.0	0.167	19.04	552.14
750	398.89	11.2	0.170	19.38	552.26
800	426.67	11.5	0.173	19.90	557.22
850	454.44	11.7	0.176	20.25	557.25
900	482.22	12.0	0.178	20.77	565.11
950	510.00	12.2	0.181	21.11	565.01
1000	537.78	12.4	0.184	21.46	564.91
1050	565.56	12.7	0.186	21.98	572.35
1100	593.33	12.9	0.189	22.33	572.14
1150	621.11	13.1	0.191	22.67	574.92
1200	648.89	13.3	0.194	23.02	574.68
1250	676.67	13.6	0.196	23.54	581.64
1300	704.44	13.8	0.199	23.88	581.30
1350	732.22	14.0	0.201	24.23	583.86
1400	760.00	14.2	0.203	24.58	586.36
1450	787.78	14.4	0.206	24.92	585.96
1500	815.56	14.6	0.208	25.27	588.39

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Table 4.1-3. Thermal Properties of A 516 Carbon Steel (Ref. 5.15)

Temperature		Thermal Conductivity (Btu/hr-ft-°F)	Thermal Diffusivity (ft²/hr)	Thermal Conductivity (W/m-K)	Specific Heat (J/kg-K)
°F	°C				
70	21.11	23.6	0.454	40.84	428.72
100	37.78	23.9	0.443	41.36	444.95
150	65.56	24.2	0.433	41.88	460.94
200	93.33	24.4	0.422	42.23	476.87
250	121.11	24.4	0.414	42.23	486.08
300	148.89	24.4	0.406	42.23	495.66
350	176.67	24.3	0.396	42.06	506.09
400	204.44	24.2	0.386	41.88	517.07
450	232.22	23.9	0.375	41.36	525.64
500	260.00	23.7	0.364	41.02	536.99
550	287.78	23.4	0.355	40.50	543.63
600	315.56	23.1	0.346	39.98	550.62
650	343.33	22.7	0.333	39.29	562.21
700	371.11	22.4	0.320	38.77	577.32
750	398.89	22.0	0.308	38.08	589.10
800	426.67	21.7	0.298	37.56	600.57
850	454.44	21.2	0.286	36.69	611.35
900	482.22	20.9	0.274	36.17	629.09
950	510.00	20.5	0.262	35.48	645.12
1000	537.78	20.0	0.248	34.61	665.12
1050	565.56	19.6	0.237	33.92	682.07
1100	593.33	19.2	0.228	33.23	694.52
1150	621.11	18.7	0.213	32.36	724.07
1200	648.89	18.2	0.197	31.50	761.95
1250	676.67	17.5	0.179	30.29	806.31
1300	704.44	16.7	0.155	28.90	888.60
1350	732.22	15.8	0.119	27.35	1095.04
1400	760.00	15.3	0.077	26.48	1638.78
1450	787.78	15.1	0.154	26.13	808.68
1500	815.56	15.1	0.169	26.13	736.90

Table 4.1-3 lists the thermal properties of A 516 carbon steel (see assumption 4.3.24). Values for thermal conductivity and thermal diffusivity of A 516 (C-Mn-Si) were taken from Table I-4.0, Appendix I of the 1986 ASME Boiler and Pressure Vessel Code (p. 97, Ref. 5.15) and are converted here to conductivity and specific heat in SI units. The conversion of thermal diffusivity (defined in equation 4.1-1) to specific heat requires the density listed in Table 4.1-4.

Table 4.1-4 lists the density and emissivity of A 516 carbon steel. The density of A 516 (C-Mn-Si) was taken from Table A.1 of a standard heat transfer text (p. 670, Ref. 5.16) and the emissivity (average for smooth oxidized iron) was taken from Table 4.3.2 of Marks' Handbook (p. 4-68, Ref. 5.17).

Table 4.1-4. Material Properties of A 516 Carbon Steel (Refs. 5.16 and 5.17)

	Density	Emissivity
A 516 Carbon Steel	8131.0 kg/m ³	0.80

Tables 4.1-5 and 4.1-6 list the material and thermal properties of density, emissivity, thermal conductivity, and specific heat of Alloy 825 (see assumption 4.3.25). The density of Alloy 825 (Ni-Fe-Cr-Mo-Cu) provided in Table 4.1-5 was taken from the product specifications published by the manufacturer; Huntington Alloys (p. 31, Ref. 5.19). The emissivity of Alloy 825 (Ni-Fe-Cr-Mo-Cu) provided in Table 4.1-5 was taken from the LLNL report on the Thermal Performance of a Buried Nuclear Waste Storage Container Storing a Hybrid Mix of PWR and BWR Spent Fuel Rods (p. 15, Ref. 5.20).

Table 4.1-5. Material Properties of Alloy 825 (Refs. 5.19 and 5.20)

	Density	Emissivity
Alloy 825	8137.9 kg/m ³	0.80

Table 4.1-6 lists the thermal properties of Alloy 825. Values for thermal conductivity and thermal diffusivity of Alloy 825 (Ni-Fe-Cr-Mo-Cu) were taken from Table I-4.0, Appendix I of the 1986 ASME Boiler and Pressure Vessel Code (p. 97, Ref. 5.15) and are converted here to conductivity and specific heat in SI units. The conversion of thermal diffusivity (defined in equation 4.1-1) to specific heat requires the density listed in Table 4.1-5.

Table 4.1-6. Thermal Properties of Alloy 825 (Ref. 5.15)

Temperature		Thermal Conductivity (Btu/hr-ft-°F)	Thermal Diffusivity (ft²/hr)	Thermal Conductivity (W/m-K)	Specific Heat (J/kg-K)
°F	°C				
200	93.33	7.1	0.127	12.29	460.69
250	121.11	7.3	0.126	12.63	477.42
300	148.89	7.6	0.125	13.15	501.02
350	176.67	7.9	0.129	13.67	504.65
400	204.44	8.1	0.134	14.02	498.12
450	232.22	8.4	0.133	14.54	520.45
500	260.00	8.6	0.132	14.88	536.88
550	287.78	8.9	0.131	15.40	559.85
600	315.56	9.1	0.130	15.75	576.83
650	343.33	9.3	0.133	16.10	576.21
700	371.11	9.6	0.136	16.61	581.68
750	398.89	9.8	0.135	16.96	598.20
800	426.67	10.0	0.133	17.31	619.58
850	454.44	10.2	0.132	17.65	636.76
900	482.22	10.4	0.131	18.00	654.20
950	510.00	10.7	0.130	18.52	678.25
1000	537.78	10.9	0.129	18.86	696.29
1050	565.56	11.1		19.21	
1100	593.33	11.4		19.73	
1150	621.11	11.6		20.08	
1200	648.89	11.8		20.42	
1250	676.67	12.1		20.94	
1300	704.44	12.4		21.46	
1350	732.22	12.7		21.98	
1400	760.00	12.9		22.33	
1450	787.78	13.3		23.02	
1500	815.56	13.6		23.54	

Table 4.1-7 lists the thermal properties of helium (see assumption 4.3.22). Values for thermal conductivity and thermal diffusivity of helium were taken from Table A.4, Appendix A of a standard heat transfer text (p. 683, Ref. 5.16). Indicated values were linearly interpolated from the data supplied in the reference.

Table 4.1-7. Thermal Properties of Helium (Ref. 5.16)

Temperature		Helium Density at 1 atm. (kg/m ³)	Thermal Conductivity (W/m·K)	Specific Heat (J/kg·K)
K	°C			
260	-13.15	0.1875	0.137	5193.0
280	6.85	0.1750*	0.145	5193.0
300	26.85	0.1625	0.152	5193.0
350	76.85	0.1422*	0.170	5193.0
400	126.85	0.1219	0.187	5193.0
450	176.85	0.1097*	0.204	5193.0
500	226.85	0.0975	0.220	5193.0
550	276.85	0.0906*	0.236*	5193.0
600	326.85	0.0836*	0.252	5193.0
650	376.85	0.0767*	0.264	5193.0
700	426.85	0.0697	0.278	5193.0
750	476.85	0.0662*	0.291	5193.0
800	526.85	0.0627*	0.304	5193.0
900	626.85	0.0558*	0.330	5193.0
1000	726.85	0.0488	0.354	5193.0

* Values marked with an * were linearly interpolated from the table because values were not given.

Table 4.1-8 lists the thermal properties of aluminum-boron alloy (see assumption 4.3.26). Values for thermal conductivity and thermal diffusivity for aluminum-boron alloy were taken from Table 3 of a report by Properties Research Laboratory on the thermal conductivity of aluminum-boron alloy (p. 4, Ref. 5.21). The emissivity of aluminum-boron alloy is assumed to be equivalent to that of a rough plate of aluminum (see assumption 4.3.26). The emissivity of a rough plate of aluminum at 26°C is 0.07 as reported in Table 4.3.2 of Marks' Handbook (p. 4-68, Ref. 5.17).

Table 4.1-8. Thermal Properties of Aluminum-Boron Alloy (Ref. 5.21)

Temperature		Al-B Alloy Density (kg/m ³)	Thermal Conductivity (W/m·K)	Specific Heat (J/kg·K)
K	°C			
296.15	23.0	2693.0	182.56	868.0
323.15	50.0		190.17	903.0
373.15	100.0		199.22	946.0
423.15	150.0		202.91	976.0
473.15	200.0		203.72	998.0

Table 4.1-9 lists the thermal properties of C71500 70/30 copper-nickel alloy (see assumption 4.3.27). Values for thermal conductivity for C71500 70/30 copper-nickel alloy were taken from Tables 2-46 and 2-48 of a report issued by Yucca Mountain Site Characterization Project which provided basic design data (p. 44, Ref. 5.22). The density and specific heat of C71500 70/30 copper-nickel alloy were taken from Table 2-46 of the same report (p. 43, Ref. 5.22).

Table 4.1-9. Thermal Properties of C71500 70/30 Copper-Nickel Alloy (Ref. 5.22)

Temperature		C71500 Density (lb/in ³)	C71500 Density (kg/m ³)	Thermal Conductivity (Btu/ hr-ft ·°F)	Thermal Conductivity (W/m·K)	Specific Heat (Btu/ lb·°F)	Specific Heat (J/kg·K)
°F	°C						
68.0	20	0.323	8940.64	17.0	29.42	0.09	376.79
212.0	100	0.323	8940.64	16.9	29.25	0.09	376.79
392.0	200			19.7	34.09		
572.0	300			22.3	38.59		
752.0	400			24.9	43.09		
832.0	500			27.8	48.11		
1112.0	600			30.7	53.13		
1292.0	700			33.6	58.15		

4.2 Criteria

The design of the engineered barrier segment (EBS) will depend on thermal analyses of the repository host rock and near-field. Criteria that relate to the thermal analysis of the EBS are derived from the applicable requirements and planning documents. Upper-level systems requirements are provided in the Mined Geologic Disposal System Requirements Document (MGDS-RD) (Ref. 5.6). The requirements flow down to the Engineered Barrier Design Requirements Document (EB-DRD, Ref. 5.5) as specific requirements for engineered barrier segment design. The Waste Package Implementation Plan (WPIP) (Ref. 5.10) also provides criteria and goals for the thermal design of the EBS. The criteria applicable to thermal analysis of waste package emplacement are equivalent to the applicable requirements, interface requirements, and criteria cited in the MGDS-RD, EB-DRD, WPIP and all requirements which apply to thermal analysis are listed in this section for completeness.

4.2.1 MGDS-RD Requirements for Thermal Design

The criteria applicable to thermal analysis of waste package emplacement which appear in the MGDS-RD (pp. 29, 44, 107; Ref. 5.6) but do not appear in the EB-DRD are listed here:

"3.1.5 Major Considerations and Assumptions

...
M.

It is assumed that loaded MPCs emplaced for disposal will have a maximum thermal output of 14.2 kilowatts. Accommodation of this condition will require management of the waste delivery schedule or storage of loaded MPCs with a higher thermal output until the thermal output has decreased to 14.2 kilowatts. This 14.2 kilowatts is equivalent to the thermal output of 21 PWR assemblies with 40 GWd/MTU burnup and 3.75% initial enrichment 10 years after discharge from a reactor. (Twenty-one assemblies represents the capacity of one of several potential MPC configurations.)"

"3.2.3.2.3 MGDS-Transportation Interface Requirements

...
J.

The MGDS shall provide an emplacement environment (e.g., waste package design, underground facility design, emplacement mode or orientation, spacing between waste packages, etc.) for the MPC with disposal container, such that an emplaced waste package with thermal output of 14.2 kW will not result in an MPC surface temperature higher than 225°C <TBR> [Ref 2.4.2.C][RW-0199][10 CFR 60.135(a)(2)][Derived by 3.2.1.1.H]

The MPC Design is responsible for maintaining the peak SNF cladding temperature below the maximum temperature designated for disposal. To meet this requirement, the peak cladding temperature in a loaded MPC with a thermal output of 14.2 kW may not exceed 350°C when subjected to an MPC external wall temperature of 225°C."

"3.7.3.3 **Waste Package Requirements**

- ...
- B.2. Waste packages shall be emplaced in an environment (e.g., waste package design, underground facility design, emplacement mode or orientation, spacing between waste packages, etc.), such that SNF cladding temperatures in an emplaced waste package do not exceed 350°C <TBR>. [10 CFR 60.135(a)(2)][Derived by CRD 3.2.1.1.H]"

4.2.2 EB-DRD Requirements for Thermal Design

The criteria applicable to thermal analysis of waste package emplacement are equivalent to the applicable requirements in the EB-DRD (pp. 3-10, 3-14, 3-21, 3-23, 3-25, 3-26, 3-47, 3-49, 3-50, 3-53, and 3-54; Ref. 5.5) and are listed here:

"3.1.5 **MAJOR CONSIDERATIONS AND ASSUMPTIONS**

- ...
- B. The assumption used in developing this EB-DRD is that the extent of blending (i.e., the mixing in waste packages of SNF and/or HLW of different thermal outputs) required is limited to that which can be accommodated by the WA process.

Thermal loading studies will determine the extent of blending that must occur. Limited blending can be accomplished at the MRS through the WA process. If significant blending is required, this could have a major impact on the MRS and/or MGDS design and operations, and will be the subject of system studies. If these studies show that changes in system design requirements are necessary, the RDs will be revised."

"3.2.2 **RADIOLOGICAL PROTECTION**

3.2.2.1 **GENERAL REQUIREMENTS**

- ...
- C. The Engineered Barrier Segment, together with the Repository Segment, shall provide adequate shielding from radioactive components and high ambient temperatures. [Derived]"

"3.2.3.3 ENGINEERED BARRIER SEGMENT - REPOSITORY SEGMENT
INTERFACE REQUIREMENTS

...
A.8. The Repository Segment will accommodate the emplacement concept (TBD) selected during ACD. [Derived]

...
b. The Repository Segment design will prevent free-liquid-phase water from contacting the waste package during the period from package insertion until repository closure. [Derived]

c. The Repository Segment layout will be designed so that a combination of characteristics will assist in keeping liquid water from contacting the waste packages for the first 300 to 1000 (TBV) years after closure. [Derived]

d. The Repository Segment layout will also ensure that the design limit temperatures (TBD) for waste forms are not exceeded. [Derived]

...
A.10 If the design requires the waste form to be transferred for any purpose (such as from shipping casks to waste packages), the Repository Segment is responsible for the following:

...
b. Repository Segment options at the surface handling facility will be designed so that cladding failure from mechanical abrasion or deformation considering thermally-induced effects will result in less than five percent (TBV) cladding strain. [Derived]

...
A.17 The underground facility will be designed so that the performance objectives will be met taking into account the predicted thermal and thermo-mechanical response of the host rock, and surrounding strata, and ground water system. [MGDS-RD 3.7.3.4.C][10 CFR 60.133(i)]"

"3.2.3.4 ENGINEERED BARRIER SEGMENT - WASTE ACCEPTANCE
INTERFACE REQUIREMENTS

...
A. WA will provide standard HLW meeting the following criteria:

...
1.e. Total heat generation rate: Up to 1500 watts per canister (TBV) at the year of shipment.

- 1.f. Waste temperature: Will not have exceeded 400°C (TBV) during transit to ensure the glass transition temperature was not exceeded. [MGDS-RD 3.2.3.2.2.B.1]

...
C. WA will provide standard SNF meeting the following criteria:

- 1.b. Cross-section: 6 inches x 6 inches or less for BWR and 9 inches x 9 inches or less for PWR (TBV). [MGDS-RD 3.2.3.2.2.A.1][10 CFR 961.11, App. E, B.1]

- 1.d. Cooling: The minimum cooling time for fuel is five (5) years. [MGDS-RD 3.2.3.2.2.A.1][10 CFR 961.11, App. E, B.3]

- 1.f. Consolidated Fuel Rods: Fuel which has been disassembled and stored with the fuel rods in a consolidated manner shall be classified as Nonstandard Fuel Class NS-5. [MGDS-RD 3.2.3.2.2.A.1][10 CFR 961.11, App E., B.5]

2. Temperature will not have exceeded 350°C (TBV) during storage under inert gas. [Derived]"

"3.7

ENGINEERED BARRIER SEGMENT MAJOR COMPONENT CHARACTERISTICS/REQUIREMENTS

The major components of the Engineered Barrier Segment are the waste packages, the underground facility, any backfill placed in the emplacement drifts, and any emplacement hardware provided to support and protect the emplaced waste package. (The underground facility portion of the Engineered Barrier Segment and the associated requirements allocated to the EB-DRD by the MGDS-RD are identified as interfaces with the Repository Segment in Section 3.2.3.3.) These major components shall be capable of contributing to the assigned function, Isolate Waste (1.4.3), by containing waste in the waste package during the containment period of 300 to 1,000 years (TBR), and then by limiting the release of radionuclides during the post-containment period. [MGDS-RD 3.7.3.1.A, B] [CRD 3.7.4.1.1]

- G. To limit the predicted thermal and thermo-mechanical response of the host rock and surrounding strata, and groundwater system, the Engineered Barrier Segment configuration and loading shall:

1. Limit borehole wall temperature (if a borehole is used) to 275°C (TBV)
2. Limit the maximum temperature 1 meter into the rock to 200°C (TBV)
3. Limit the TSw3 (vitrophyre tuff) maximum temperature to 115°C (TBV)
4. Limit the maximum ground surface temperature change in the vicinity of the repository to 6°C (TBV)
5. Limit the emplacement drift maximum temperature to 100°C (TBV)
6. Limit the access drift maximum temperature to 50°C (TBV)

[MGDS-RD 3.7.3.4.C] [10 CFR 60.133(i)]"

"3.7.1

WASTE PACKAGE SUBSYSTEM REQUIREMENTS

...

- B. The design of waste packages shall include, but not limited to, consideration of the following factors: solubility, oxidation/reduction reactions, corrosion, hydriding, gas generation, thermal effects, mechanical strength, mechanical stress, radiolysis, radiation damage, radionuclide retardation, leaching, fire and explosion hazards, thermal loads, and synergistic interactions.

[MGDS-RD 3.7.3.3.B] [10 CFR 60.135(a)(2)]"

"3.7.1.3

INTERNAL STRUCTURE REQUIREMENTS

...

- G. The internal structure shall maintain functionality under the thermal and chemical conditions generated by the waste form.
[Derived]"

"3.7.2

BACKFILL REQUIREMENTS

...

- C. The transfer of heat from the waste package to the geologic setting by the backfill material shall not have an adverse effect on the long term performance of the WP.
[Derived]"

- ...
- F. The chemical and mechanical stability of the backfill when subjected to the maximum thermal environment anticipated in the repository shall not have an adverse effect on the long term performance of the waste package. [Derived]"

4.2.3 WPIP Criterion for Thermal Design

The impetus to perform thermal evaluations of the waste package and near-field is provided by the Waste Package Implementation Plan (WPIP, Ref. 5.10). Design goals and the activities supporting these goals are listed in the WPIP. The source of the design goals is, for the most part, the Engineered Barrier Design Requirements Document and for the remainder the design goals were selected based upon engineering judgement. Design goals related to thermal analysis are listed in Section 2.4 of the WPIP (p. 2-4; Ref. 5.10) and provide basic thermal criteria for the design of the EBS:

"2.4 DESIGN GOALS

- ...
- Center line fuel pin temperature limit of (to be determined (TBD)) °C
 - Rock wall temperature limit of (TBD) °C
 - Thermal loading of the repository (TBD)

...

The maximum temperature of the glass waste forms must be maintained below limits established for them. This limit is about 500°C (to be verified) for West Valley Defense High-Level Waste glass. The YMP and the glass producers have the responsibility to maintain the peak temperature below the transition temperature.

- ...
- Meet temperature limits for components
 - Provide for a range of thermal loads
 - Provide capability to adjust repository thermal loading after emplacement"

Activities to support the design goals related to thermal analysis are indicated in Sections 3.4, 4.5, and 5.1 of the WPIP (pp. 3-2, 4-31, and 5-1; Ref. 5.10):

"3.4 PERFORMANCE ALLOCATION

... Thermal analyses will be performed to determine the temperature profiles across the drifts for drift emplacement. Limited thermal analyses will also be performed for the borehole emplacement modes, assuming various package sizes

and thermal loadings. These analyses will permit the re-evaluation of the goals given in the SCP for performance measures. ..."

"4.5 ENVIRONMENTAL INFORMATION NEEDS

...

4.5.2 Hydrologic Properties

Determine hydrologic (and thermal) properties of the WP environment in order to:

- Develop comprehensive model of the thermal and hydrologic behavior of the waste package environment as a function of overall repository thermal loading and rock properties, including two phase fluid flow.
- Use the model to forecast the near field temperature and fluid flow; these near field parameters will be used by the M&O Waste Package Development, M&O PA, and LLNL to calculate/forecast the WP temperatures (surface and centerline) and the distribution of corrosion rates and package lifetimes (as input to the models determined by the chemical and mineralogical properties investigation described above)."

"5.1 WP/EBS DESIGN ACTIVITIES

...

2. Thermal Evaluation (time dependent)
 - 2.1. Internal
 - 2.1.1. SNF and HLW
 - 2.1.2. WP basket
 - 2.1.3. WP internal barrier(s)
 - 2.1.4. WP body
 - 2.1.5. Closure
 - 2.2. External, EBS and near field
 - 2.3. Receipt rate and thermal variability"

4.2.4 Thermal Goals for EBS Design

Based on assumption 4.3.1, the requirements of Section 3.7.G of the EB-DRD (Ref. 5.5), and the design goals of the WPIP (Ref. 5.10), the following thermal criteria are established for the design of the EBS:

- Keep the rock mass temperature at 1 meter from a vertical borehole less than 200°C.
- Keep the emplacement drift wall temperature less than 200°C.

- Limit the TS_{w3} (basal vitrophyre) maximum temperature to less than 115°C.
- Limit the maximum ground surface temperature change in the vicinity of the repository to less than 2°C.
- Limit the emplacement drift maximum temperature for borehole emplacement to less than 100°C.
- Limit the access drift wall rock maximum temperature to less than 50°C during preclosure.
- Limit the CH_n maximum temperature to less than 115°C.
- Limit the PT_n (Upper Paint Brush non-welded) maximum temperature to less than 115°C.
- Limit the SNF cladding maximum temperature to less than 350°C.
- Limit the high-level waste glass maximum temperature to less than 500°C.
- The structural strength of any material component of the waste package shall not be compromised by temperature/environment of the EBS environment.
- Maximize the time the waste package container stays above boiling consistent with the thermal strategy developed.

The above thermal criteria are in addition to those previously quoted from the EB-DRD (Ref. 5.5).

4.2.5 Thermal Goals/Criterion Addressed by this Analysis

Based on assumption 4.3.1, the requirements listed in the previous sections, and the design goals of the WPIP (Ref. 5.10), the following thermal criteria are to be addressed by this analysis:

- Limit the SNF cladding maximum temperature to less than 350°C.
- The structural strength of any material component of the Waste Package shall not be compromised by temperature/environment of the EBS environment.

4.3 Assumptions

All design inputs are for pre-Title II designs; some or all of these design inputs will require subsequent qualification (or superseding inputs) as the waste package design proceeds. The design inputs identified and documented in Section 4 have been assigned the single tracking number TBV-214-WPD, to meet tracking requirements in accordance with applicable procedures.

4.3.1 The following thermal criteria are assumed to apply to the design of the Engineered Barrier Segment. These criteria are consistent with current program decisions in the Controlled Design Assumption Document (CDA, Ref. 5.7). The criteria are originally based on a reevaluation of the Site Characterization Plan (SCP) thermal goals (Table 3, p. 22, Ref. 5.33). Each thermal criterion is listed here followed by its CDA or SCP reference. This assumption is used in Section 4.2. As specified in Section 4.2.5, only the 350°C SNF cladding temperature and the material structural strength criteria are used directly for this analysis. These two criteria are used throughout Section 7. However, the other listed items are used in reference 5.13 and were used to generate the waste package surface boundary conditions used for this analysis. They are listed here in the interests of consistency.

- Keep the rock mass temperature at 1 meter from a vertical borehole less than 200°C. (CDA EB-DRD 3.7.G.2, p. 6-76, Ref. 5.7)
- Keep the emplacement drift wall temperature less than 200°C. (CDA EB-DRD 3.7.G.2, p. 6-76, Ref. 5.7)
- Limit the TS_{w3} (basal vitrophyre) maximum temperature to less than 115°C. (CDA EB-DRD 3.7.G.3, p. 6-77, Ref. 5.7)
- Limit the maximum ground surface temperature change in the vicinity of the repository to less than 2°C. (CDA EB-DRD 3.7.G.4, p. 6-78, Ref. 5.7)
- Limit the emplacement drift maximum temperature for borehole emplacement to less than 100°C. (CDA EB-DRD 3.7.G.5, p. 6-79, Ref. 5.7)
- Limit the access drift wall rock maximum temperature to less than 50°C during preclosure. (CDA EB-DRD 3.7.G.6, p. 6-80, Ref. 5.7)
- Limit the CH_n maximum temperature to less than 115°C. (CDA DCSS 025, p. 6-155, Ref. 5.7)
- Limit the PT_n (Upper Paint Brush non-welded) maximum temperature to less than 115°C. (CDA DCSS 031, p. 6-160, Ref. 5.7)

- Limit the SNF cladding maximum temperature to less than 350°C. (CDA DCWP 001, p. 6-165, Ref. 5.7)
 - Limit the high-level waste glass maximum temperature to less than 500°C. (CDA DCWP 002, p. 6-166, Ref. 5.7)
 - The structural strength of any material component of the waste package shall not be compromised by temperature/environment of the EBS environment. (derived from p. 2-4, Ref. 5.10, and EB-DRD 3.7.1.3.E, p. 3-53, Ref. 5.5)
 - Maximize the time the waste package container stays above boiling consistent with the thermal strategy developed. (Table 3, p. 23, Ref. 5.33)
- 4.3.2 Two primary high thermal loadings (100 MTU/acre and 83 MTU/acre) and a couple variations of a low thermal loading (25 MTU/acre) will be considered in this analysis. These values are consistent with the range of thermal loadings (20 - 100 MTU/acre) given in the CDA (Key 019, p. 6-24, Ref. 5.7). Systems Engineering (p. 2, Ref. 5.23) recommended thermal loadings of 25 and 83 MTU/acre be used for MGDS design analysis in order for the MGDS to present a consistent design. A thermal loading of 100 MTU/acre represents the likely maximum possible without violating thermal goals according to the FY 93 Thermal Loading System Study (p. 10-2, Ref. 5.24) and is a bounding case for this analysis. This assumption is used in Section 7.1.
- 4.3.3 The waste package will be emplaced in-drift in a horizontal mode. This is consistent with large waste packages such as the UCF with disposal container and is a current program decision (CDA Key 011, p. 6-18, Ref. 5.7). This assumption is used throughout Section 7.
- 4.3.4 Reference 5.40 (pp. 22, 35) determined the thermal design basis BWR SNF for the MGDS waste package to have the following characteristics: 1) an age (or cooling time) of 10 years at the time of emplacement, 2) a burn up of 49,000 MWd/MTU, and 3) average assembly uranium enrichment of 3.74%. To complete the characterization of the BWR SNF, it is assumed that a GE-7 8x8 SNF assembly with a uranium mass of 0.200 MTU/assembly and an active fuel length of 150 inches will adequately represent the BWR SNF as a class of waste. This data is required in order to determine the decay heat curve of the MGDS thermal design basis BWR SNF. Based upon data from pages 2A-21 and 2A-22 of reference 5.12 and page 26 of reference 5.39, 0.200 MTU/assembly and an active fuel length of 150 inches was selected to conservatively bound the BWR assembly types given the wide variety of uranium loading configurations. This assumption is used throughout Sections 6 and 7.

- 4.3.5 The decay heat curve for the MGDS thermal design basis was generated with the use of the PHIA V00B code with data input from Attachment 2 of reference 5.30. The data from reference 5.30 is assumed to accurately represent the SNF currently in storage throughout the United States. Use of the data from reference 5.30 is consistent with the reasons for its creation. This assumption is used throughout Section 7. The PHIA V00B code is presented in Attachment I and the data used from reference 5.30 as input to the PHIA V00B code is presented in Attachment II. The decay heat curve is presented in Sections 6 and 7.4.
- 4.3.6 The material properties, i.e., effective thermal conductivities, used for the B&W 15x15 PWR SNF in reference 5.40 may be conservatively applied to the GE-7 8x8 BWR SNF for this analysis. The basis for this assumption is that the dominant mode of heat transfer from SNF to the basket is radiation. The BWR bundle has larger view factors to the waste package basket for the center rods of an assembly than the PWR counterpart. Thus, it is expected that the BWR SNF assembly will dissipate heat more efficiently than the PWR SNF assembly. Therefore, using the PWR effective conductivity material properties for the BWR SNF assembly is expected to over-predict the BWR SNF cladding temperatures. Also, the use of data from reference 5.40 requires that the heat generation be homogenous in the modeled SNF region. Heat generation in SNF regions must be applied in this fashion to use the reference 5.40 data in a consistent manner. This assumption is used throughout Section 7.
- 4.3.7 The UCF with disposal container model assumes that a two-dimensional finite element model of a cross section at the midsection of the waste package will be representative of the hottest portion of the waste package. Inherent in this assumption is that axial heat transfer does not significantly affect the solution (i.e., the flow of heat in the radial direction is assumed to dominate the solution). The basis for this assumption is that the metal thermal conductivities and heat generation distributions are such that axial heat transfer is very small or negligible. This was shown by the analysis in reference 5.13 which modeled the waste package in three dimensions. This assumption is used throughout Section 7.
- 4.3.8 For the cross section model of the waste package, an axial power peaking factor of 1.40 is applied to the BWR SNF heat generation rate. This factor is based upon the data in Appendix E of reference 5.34 and is assumed to bound the range of axial power peaking factors for BWR SNF. The basis for this assumption is that BWR reactor cores are designed such that axial peaking larger than 1.40 is not desirable for the full duration of a reactor operating cycle for both licensing and economic reasons. This assumption is used throughout Section 7.

- 4.3.9 The average waste package surface temperatures (time dependent), as defined in reference 5.13 for each thermal load case, will be applied as the boundary conditions for the detailed waste package analysis (normal conditions). The detailed waste package model will examine the design basis SNF rather than the average SNF which will result in slightly higher near field temperatures. This effect; however, will be assumed to have a small impact upon the SNF cladding temperatures calculated and will be neglected. The basis for this assumption is engineering judgement. This assumption is used throughout Section 7.
- 4.3.10 The effects of drift backfilling will not be considered for the repository base case analysis. Backfill material has not been defined to date and will not be considered to be within the scope of this analysis. Backfill effects on the waste package design will be addressed in a different analysis. This assumption is used throughout Section 7.
- 4.3.11 The UCF conceptual design SNF basket and internal structure as presented in references 5.31, 5.35, and 5.37 is assumed to be the representative design which specifies the geometry and materials of construction. The basis of this assumption is that the specified references are the only UCF design documents available. This assumption is used throughout Section 7.
- 4.3.12 The UCF disposal container shell material composition, geometry, and dimensions are assumed to be those specified in reference 5.31. This data is also presented as Waste Package Development sketches which are identified as specified in references 5.35 and 5.37, and are based upon reference 5.31. This assumption is consistent with CDA KEY 042, page 6-37 of reference 5.7. This assumption is used throughout Section 7.
- 4.3.13 The UCF waste package is assumed to be evacuated and backfilled with helium gas. The basis for this assumption is that this process is considered on pages II.A.3-20, II.A.3-53, and II.A.4-2 of reference 5.8 as a method to meet the internal humidity requirement for the Multi-Purpose Canister (MPC) internals. The UCF is assumed to use the same evacuation / backfilling operation as the MPC in order to provide a consistent MGDS EBS concept. This assumption is used throughout Section 7.
- 4.3.14 Part length tube guides shall not be included in the ANSYS model and will be conservative with respect to internal temperature estimations. The basis of this assumption is that the part length tube guides are an additional conduction path from the SNF tubes to the waste package shell. Elimination of this conduction path forces more heat to be dissipated by conduction through the helium gap or by radiative heat transfer which is less efficient than conduction through an Alloy 825 tube guide. This assumption is used throughout Section 7.

- 4.3.15 Modeling only conduction and radiative heat transfer is assumed to provide conservative results for this analysis. The basis for this assumption is as follows: the fill gas placed internally to the UCF WP will allow a convective heat transfer path to exist; however, the natural convective heat transfer will have a small or negligible contribution to the total heat transfer (see reference 5.16 for a discussion on natural convection heat transfer). Thus, the problem may be modeled with only the dominant heat transfer modes with a negligible or conservative impact upon the results. This assumption is used throughout Section 7.
- 4.3.16 It is assumed for this analysis that the waste package will not have filler material placed inside of it. The basis for this assumption is that the consideration of filler material is beyond the scope of this analysis. The affect of filler materials will be evaluated with additional analysis at a later time. This assumption is used throughout Section 7.
- 4.3.17 It is assumed for this analysis that the waste package will not be individually fitted with radiation shielding. This is consistent with the CDA; KEY 031, page 6-32, of reference 5.7. This assumption is used throughout Section 7.
- 4.3.18 It is assumed for this analysis that the waste package will not contain consolidated SNF rods, but will only contain intact SNF assemblies. See KEY 008 on page 6-15 of reference 5.7 for the justification of this assumption. This assumption is used throughout Section 7.
- 4.3.19 A perfect weld will be modeled for any waste package materials which are in contact. It is assumed for this analysis that this modeling practice has a negligible impact upon the results of the analysis. This means that a contact thermal resistance will not be modeled between touching materials. This assumption is intended to make the modeling of the problem simpler and is judged to have a negligible impact upon the results of this analysis and any non-conservative impact will be more than offset by the conservatism in the other assumptions used for this analysis. The basis for this assumption is engineering judgement. This assumption is used throughout Section 7.
- 4.3.20 The UCF waste package internal components and the waste package shell are assumed to be integrally connected. The basis for this assumption is that the current design philosophy is to weld corner guides directly to the inner shell of the waste package as indicated in references 5.35 and 5.37. Thus, the UCF waste package design will not have a third shell like the MPC design (Ref. 5.8). This assumption is used throughout Section 7.
- 4.3.21 Modeling the UCF basket tubes as touching the aluminum thermal shunts and Alloy 825 corner guides is assumed to have a minor impact upon the results. The basis for this assumption is engineering judgement given the conservative values of thermal conductivity used for the aluminum thermal shunts (see assumption 4.3.26), the

temperature drops between the MPC basket and corner guides (Ref. 5.40), and the conservative assumptions used in this analysis. The model was created to be consistent with the dimensions provided in references 5.31, 5.35, and 5.37; however, as the design evolves tolerances will be established such that some gaps will be created. Based upon the analysis documented in reference 5.40 for the MPC waste package which models small gaps that will be larger than those for the UCF WP, internal temperatures will be 10°C to 15°C higher. However, the use of aluminum-boron thermal conductivities will mitigate the affects of this assumption. Reference 5.22, page 50, provides a value of thermal conductivity at 68°F (20°C) for aluminum alloy 6063 of 201 W/m·K. This compares to the value of aluminum-boron at 23°C of 182.6 W/m·K (Table 4.1-8). This indicates that the use of the aluminum-boron thermal conductivities invokes roughly a 10% reduction in thermal conductivity for aluminum 6063. Thus, these two modeling conventions roughly balance each other such that the effect on the results of the calculation is judged to be small. This assumption is used throughout Section 7.

- 4.3.22 The properties of helium at atmospheric pressure are assumed to be representative of the conditions which helium in the UCF will experience. This assumption is based upon the fact that a one atmosphere fill pressure is representative of industry standard for storage casks. Page 10 of reference 5.36 provides the highest pressure which storage casks are filled as approximately 1.5 atmosphere; also most industry vendors use substantially lower pressure in their designs. Use of one atmosphere is representative of the most likely pressure to be used. This assumption is used in Section 4.1 and throughout Section 7.
- 4.3.23 Use of the material properties for stainless steel 316 provided in Tables 4.1-1 and 4.1-2 is assumed to adequately represent any stainless steel or borated stainless steel (316 B6A) materials used in the UCF waste package for this analysis. Particularly the use of a constant value for the density and emissivity is assumed to be adequate for this analysis. The basis for this assumption is engineering judgement and the fact that the temperature dependent values of thermal conductivity and specific heat are specified well enough to cover the anticipated temperatures the UCF is expected to experience. Also, the values for density and emissivity change only slightly over the expected range of temperatures. Thus, using a single value will not affect the results of the analysis. This assumption is used in Section 4.1 and throughout Section 7.
- 4.3.24 Use of the material properties for A 516 carbon steel provided in Tables 4.1-3 and 4.1-4 is assumed to adequately represent A 516 carbon steel for this analysis. Particularly the use of a constant value for the density and emissivity is assumed to be adequate for this analysis. The basis for this assumption is engineering judgement and the fact that the temperature dependent values of thermal conductivity and specific heat are specified well enough to cover the anticipated temperatures the UCF is expected to experience. Also, the values for density and emissivity change only slightly over the expected range of temperatures. Thus, using a single value will not affect the results of the analysis. This assumption is used in Section 4.1 and throughout Section 7.

- 4.3.25 Use of the material properties for Alloy 825 provided in Tables 4.1-5 and 4.1-6 is assumed to adequately represent Alloy 825 for this analysis. Particularly the use of a constant value for the density and emissivity is assumed to be adequate for this analysis. The basis for this assumption is engineering judgement and the fact that the temperature dependent values of thermal conductivity and specific heat are specified well enough to cover the anticipated temperatures the UCF is expected to experience. Also, the values for density and emissivity change only slightly over the expected range of temperatures. Thus, using a single value will not affect the results of the analysis. This assumption is used in Section 4.1 and throughout Section 7.
- 4.3.26 Use of the material properties for aluminum-boron provided in Table 4.1-8 and Section 4.1 is assumed to adequately represent aluminum for this analysis. Particularly, the use of a constant value for the density and the use of the constant value of aluminum emissivity is assumed to be adequate for this analysis. The basis for this assumption is engineering judgement, the fact that non-metallic additions to metal materials will reduce the capability of the metal to conduct heat (i.e., reduce its thermal conductivity), and the fact that the temperature dependent values of thermal conductivity and specific heat are specified well enough to cover most of the anticipated temperatures the UCF is expected to experience. ANSYS does not extrapolate beyond the given tabulated values, rather it uses the last value available in the table. Thus, since thermal conductivity and specific heat generally increase with increasing temperature, ANSYS will use a conservative value if the aluminum-boron material experiences temperatures above 200°C. Also, the values for density and emissivity change only slightly over the expected range of temperatures. Thus, using a single value will not affect the results of the analysis. The use of a single value for aluminum emissivity is assumed reasonable since the emissivity for aluminum is sufficiently low at 0.07 that a lower value will have very little impact upon the solution. The results of the analysis will be conservative if the value for aluminum-boron is indeed larger. This assumption is used in Section 4.1 and throughout Section 7.
- 4.3.27 Use of the material properties for C71500 70/30 copper-nickel alloy provided in Table 4.1-9 is assumed to adequately represent C71500 70/30 copper-nickel alloy for this analysis. Particularly the use of a constant value for the density and specific heat is assumed to be adequate for this analysis. The basis for this assumption is engineering judgement and the fact that the temperature dependent values for thermal conductivity are specified well enough to cover the anticipated temperatures the UCF is expected to experience. Also, the value for density changes only slightly over the expected range of temperatures. Thus, using a single value will not affect the results of the analysis. ANSYS does not extrapolate beyond the given tabulated values, rather it uses the last value available in the table. Thus, since specific heat generally increases with increasing temperature, ANSYS will use a conservative value for specific heat by using the C71500 70/30 copper-nickel alloy specific heat at 20°C. This assumption is used in Section 4.1 and throughout Section 7.

4.3.28 The use of single, homogenized SNF material density used in conjunction with assumption 4.3.6 is assumed reasonable and adequate. The basis for this assumption is engineering judgement. The density value was determined using the BWR assembly mass from Table 5.1.1.2.1-1 on page 26 of reference 5.39 of 730 lbs (331.126 kg) and dividing by the BWR assembly volume which provides an average density in kg/m^3 (density = mass / volume). The BWR volume was determined using the overall assembly width of 5.44 inches (0.138 m) and the assembly length of 175.87 inches (4.467 m) from page 2A-21 of reference 5.12. The volume calculation is then simply that of the assembly width squared multiplied by the assembly length (volume = width x width x length). The SNF density calculated is: density = 3882.42 kg/m^3 . The value used in each of the ANSYS input decks provided in Attachments XII through XVI is 3960.0 kg/m^3 and is in error. However, the error is judged to be small relative to the given set of assumptions and will have no impact upon any of the results given the small amount of thermal energy mass storage expected in the homogeneous SNF assembly. This assumption is used throughout Section 7.

4.3.29 The use of single, homogenized SNF material specific heat used in conjunction with assumption 4.3.6 is assumed reasonable and adequate. The basis for this assumption is engineering judgement. The specific value was determined using: 1) the BWR assembly and uranium mass from Table 5.1.1.2.1-1 on page 26 of reference 5.39 of 730 lbs (331.126 kg) and 200 kg, respectively, and 2) the specific heat of uranium oxide of $247 \text{ J/kg}\cdot\text{K}$ (100°C) and Zirc2 of $330.0 \text{ J/kg}\cdot\text{K}$ (400°C) from Tables 8-1 and 8-2 on page 296 of reference 5.1. The assembly is assumed to be comprised only of uranium oxide and Zirc2; therefore, the homogenized specific heat is a simple mass weighted average (i.e., $\text{SNF } C_p = (C_p \text{ UO}_2 \cdot \text{mass UO}_2 + C_p \text{ Zirc2} \cdot \text{mass Zr2}) / \text{mass of assembly}$). The mass of UO_2 is determined from the mass of uranium (i.e., $\text{mass UO}_2 = \text{mass U} \cdot (\text{Atomic wt U} + 2 \cdot \text{Atomic wt of O}^{16}) / \text{Atomic wt of U} = 226.886 \text{ kg}$). The mass of Zirc2 is then simply the difference between the total assembly mass and the UO_2 mass (mass Zirc2 = 104.240 kg). The SNF specific heat value is then calculated to be: $\text{SNF } C_p = 273.129 \text{ J/kg}\cdot\text{K}$. The value used in each of the ANSYS input decks provided in Attachments XII through XVI is $274.0 \text{ J/kg}\cdot\text{K}$ and is in error. However, the error is judged to be small relative to the given set of assumptions and will have no impact upon any of the results given the small amount of thermal energy mass storage expected in the homogeneous SNF assembly. This assumption is used throughout Section 7.

4.4 Codes and Standards

Not Applicable. Thermal design of the waste package is not controlled by codes and standards. The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Ref. 5.15) has been used only as a source of material properties.

5. References

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- 5.2 Activity Evaluation: Perform Criticality, Thermal, Structural, and Shielding Analysis, Document Identifier (DI) Number: BB0000000-01717-2200-00025 REV 02, Civilian Radioactive Waste Management System (CRWMS) Management and Operating Contractor (M&O).
- 5.3 Quality Assurance Requirements and Description (QARD), DOE/RW-0333P, REV 5, U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM).
- 5.4 Yucca Mountain Site Characterization Project Q-List, YMP/90-55Q, REV 3, Yucca Mountain Site Characterization Project.
- 5.5 Engineered Barrier Design Requirements Document, YMP/CM-0024, REV 0, ICN 1, Yucca Mountain Site Characterization Project.
- 5.6 Mined Geological Disposal System Requirements Document, DOE/RW-0404P, DI Number: B00000000-00811-1708-00002 REV 01, DCN 01, U.S. DOE OCRWM.
- 5.7 Controlled Design Assumptions Document, DI Number: B00000000-01717-4600-00032 REV 01, CRWMS M&O.
- 5.8 Multi-Purpose Canister (MPC) Implementation Program Conceptual Design Phase Report, Volume II.A - MPC Conceptual Design Report, DI Number: A20000000-00811-5705-00002 REV 00, CRWMS M&O.
- 5.9 Waste Package Plan, YMP/90-62, REV 1, Yucca Mountain Site Characterization Project.
- 5.10 Waste Package Implementation Plan, YMP/92-11Q, REV 1, Yucca Mountain Site Characterization Project.
- 5.11 Not Used.
- 5.12 Characteristics of Potential Repository Wastes, DOE/RW-0184-R1; Volume 1, U.S. DOE OCRWM.
- 5.13 Emplacement Scale Thermal Evaluations of Waste Package Advanced Conceptual Designs, DI Number: BB0000000-01717-0200-00009 REV 00, CRWMS M&O.

- 5.14 "Heat Transfer from a Parallel-Rod Fuel Assembly in a Shipping Container", Battelle Memorial Institute, R. O. Wooton and , H. M. Epstein, August 1963.
- 5.15 1986 ASME Boiler and Pressure Vessel Code, Section III, The American Society of Mechanical Engineers, July 1, 1986.
- 5.16 Introduction to Heat Transfer, F. P. Incropera and D. P. DeWitt, John Wiley & Sons Inc., 1985.
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6. Use of Computer Software

The FEA analysis computer code used for this analysis is ANSYS version (V) 5.0A which is identified with the Computer System Configuration Identifier (CSCI) B00000000-1717-1200-30003. ANSYS is a commercially available finite element thermal and mechanical analysis code and is appropriate for the thermal analysis of waste packages, waste package emplacements, and waste package environments. The analyses using the ANSYS software were executed on a Hewlett-Packard 9000 Series 735 workstation. The software qualification of the ANSYS software, including problems of the type analyzed in this report, is summarized in the ANSYS V5.0A Verification and Validation Final Report (p. 1, Ref. 5.25). The ANSYS evaluations performed for this design are fully within the range of the validation performed for the ANSYS V5.0A code. Access to and use of the code for the analysis granted and performed in accordance with the ANSYS V5.0A Life Cycle Plan (p. 1, Ref. 5.26) and the QAP-SI series procedures. Inputs and outputs to the ANSYS software are included as attachments as described in the following design analysis.

The ANSYS SNF heat load file was generated with the computer code PHIA version (V) 00B and is classified as computational support software. PHIA V00B is not a controlled computer code and has not been qualified under the QAP-SI series of M&O procedures. PHIA requires the data provided in assumptions 4.3.4 and 4.3.5 as inputs. Based upon the data provided in assumption 4.3.4, PHIA performs a table look up using the data set of assumption 4.3.5. Once the proper sub-set of data is obtained, PHIA then will interpolate data points in order to generate an ANSYS usable data file. The PHIA code listing, input database file, and ANSYS data file are provided as Attachments I, II, and III. The PHIA code is simply an automation of a simple data manipulation which can easily be checked by hand. The data is provided in this analysis for the purpose of performing hand calculation checks. The data manipulation has been checked by hand, and will be used in this analysis on that basis. The PHIA code was utilized for the purpose of computational support software as it was intended and it is appropriate for the use of generating a ANSYS SNF heat load file. The PHIA software was executed on an IBM PC compatible.

The Wootton-Epstein correlation calculation was performed with the computer code Lotus 1-2-3 for Windows Version 1.1 and is classified as computational support software. Lotus 1-2-3 for Windows Version 1.1 is not a controlled computer code and has not been qualified under the QAP-SI series of M&O procedures and will not be qualified under the M&O procedures. Lotus 1-2-3 for Windows Version 1.1 simply provides a frame work to automate a simple calculation which can easily be checked by hand. The input data and a description of the calculation performed is provided in Section 7.4 for the purpose of performing hand calculation checks. The calculation has been checked by hand and will be used in this analysis on that basis. Lotus 1-2-3 for Windows Version 1.1 was utilized for the purpose of computational support software as it was intended and it is appropriate for the use of generating peak cladding temperatures as specified in Section 7.4. Lotus 1-2-3 for Windows Version 1.1 was executed on an IBM PC compatible.

The presentation graphics provided in Section 7.4 was generated with the computer code Harvard Graphics Version 2.0 and is classified as computational support software. Harvard Graphics Version 2.0 was executed on a IBM PC compatible. Harvard Graphics Version 2.0 is not a controlled computer code and has not been qualified under the QAP-SI series of M&O procedures and will not be qualified under the M&O procedures. Harvard Graphics Version 2.0 simply provides a frame work to create a graphical representation of data. No calculation or modification beyond cut and paste operations with tabular ANSYS or Lotus 1-2-3 output was performed in Harvard Graphics.

7. Design Analysis

7.1 Background

As part of an engineered barrier system for the containment of radionuclides, the UCF waste package (WP) must be shown to comply with all regulations and requirements that govern the conditions of the emplaced SNF and the near-field rock at the repository horizon. Temperatures in the WP and near-field host rock are key to radionuclide containment, as they directly affect oxidation rates of the metal barriers, metal and fuel cladding structural integrity, and the ability of the rock to impede particle movement.

Maximum allowable temperatures are based on material performance criteria and are specified as design goals for the WP/EBS design. For SNF, the Commercial Spent Fuel Management Program (p. xii, Ref. 5.27) at Pacific Northwest Laboratory recommended a 380°C temperature limit for the SNF cladding to prevent creep rupture failure. A more conservative value of 350°C has been selected (CDA DCWP 001, p. 6-165, Ref. 5.7) to account for uncertainties in source characteristics as well as heat transfer calculations. To limit the predicted thermal and thermo-mechanical response of the host rock and surrounding strata, maximum temperatures of 200°C for TSw2 (at the emplacement drift wall) and 115°C in the TSw3 (vitrophyre tuff) layer have been specified. Specific characteristics and requirements for the engineered barrier system are listed in the Yucca Mountain Site Characterization Project Engineered Barrier Design Requirements Document (Ref. 5.5) and are discussed in Section 4.2.

The method for WP thermal evaluations involves a three-model approach to determine the time-dependent WP thermal behavior. As presented in reference 5.13, a three-dimensional (3-D) transient finite element model of the WP emplacement provides the WP surface temperature history for use as a boundary condition. The WP boundary condition is then applied to a detailed two-dimensional (2-D) WP model; it is this 2-D model which is analyzed in this report. Resulting SNF basket wall temperature predictions from the WP model provide the boundary for an estimation of peak SNF cladding temperatures. Cladding temperatures are predicted in the WP model using an effective conductivity defined to represent an homogeneous SNF assembly. The effective conductivity was determined using a detailed third model of an intact SNF

assembly, the data files for the effective thermal conductivities are provided in reference 5.40. Cladding temperatures are also conservatively estimated using an empirical correlation from reference 5.14.

The thermal environment of the WP in the repository will change with time and is affected by the heat produced in the WP. Therefore, the WP thermal evaluation must be a transient analysis that takes into account the time varying heat load of the WP. This can be contrasted to a SNF storage cask analysis where the thermal environment is assumed constant and is provided by regulations.

To determine the effect of the WP on repository near-field temperatures, a 3-D emplacement model was evaluated for a range of thermal loadings. The analysis is described in detail in the supporting emplacement thermal model design analysis (Ref. 5.13). A parametric set of thermal loading cases, summarized in Table 7.1-1, is required because the thermal loading for the repository has been specified as a range (CDA Key 019, p. 6-24, Ref. 5.7) and the UCF WP must be shown to meet requirements over that range. Representative "high" and "low" thermal loadings of 100 MTU/acre (24.7 kg U/m²), 83 MTU/acre (20.5 kg U/m²), and 25 MTU/acre (6.2 kg U/m²) were selected (see assumption 4.3.2) to be consistent with the CDA and the Thermal Loading Systems Study (Ref. 5.24), and drift spacings in multiples of 22.5 m (see Ref. 5.13) were selected to be consistent with the Repository/WP Initial Summary Report (Ref. 5.29).

Table 7.1-1. Large Waste Package Thermal Loading Scenarios
(From Table 7.5-1 of Reference 5.13)

Areal Mass Loading (AML) MTU/acre	Initial Areal Power Density (APD) kW/acre	Waste Package Spacing	Drift Spacing
100 (high #1)	113.7	16.2 m	22.5 m
83 (high #2)	94.4	19.5 m	22.5 m
25 (low #1)	28.4	32.3 m	45.0 m
25 (low #2)	28.4	21.6 m	67.5 m
25 (low #3)	28.4	16.2 m	90.0 m

The low thermal loading drift spacings described in Table 7.1-1 represent the utilization of even multiples of the high thermal loading drift spacing (every other drift, every third, etc.). Low thermal loading #1 achieves the longest reasonable WP spacing and results in the lowest near-field temperatures; low thermal loading #2 has a WP spacing similar to that for the high thermal loading; and low thermal loading #3 has a short WP spacing and represents the "localized

disturbance" concept for low loadings. The "localized disturbance" concept depends on high temperature gradients (due to the closely spaced WPs) to drive local water in the rock away from the emplacement drifts. The analysis performed in reference 5.13 was performed to determine the rock wall temperatures for these conditions and whether the rock temperature goals were met. The WP surface temperatures from that analysis can be used as a boundary condition to determine the WP internal and SNF cladding temperatures.

7.2 Design Basis Fuel

To capture a majority of the SNF, the WP must be designed and evaluated to accommodate the bounding or limiting case of fresh SNF which has a thermal output much higher than average. Thus, a design basis SNF can be determined which can be considered the hottest SNF that could be loaded and emplaced in that waste package. The detailed waste package/EBS evaluation would then represent the hottest waste package in a repository at a given thermal loading (with otherwise average SNF). While all of the waste packages (hot and cold) will collectively influence repository temperatures (average SNF characteristics), every waste package must meet thermal goals (design basis SNF characteristics). The methodology and selection of design basis SNF for WP design is covered in reference 5.40.

Given that higher capacity waste packages are more likely to exceed thermal goals than smaller ones in the same repository thermal environment, the choice of a design basis SNF is important because it could limit the number of assemblies that can be loaded in one waste package without exceeding thermal goals for disposal. The limiting thermal goal for waste packages, such as the 44 BWR UCF waste package, is a temperature of no more than 350°C at the SNF cladding. Several different design basis SNF types have been used by the OCRWM to demonstrate compliance with requirements and to allow comparison with previous evaluations. Table 7.2-1 summarizes the SNF types used. The heat loads for each assembly type were interpolated from the database of spent fuel characteristics (Ref. 5.30) for each of the assumed design basis SNF types using the PHIA V00B code (see Attachment I).

Table 7.2-1. Thermal Analysis SNF Design Bases

Organization	SNF Type	SNF Age	SNF Burnup	Initial Heat
MGDS (Ref. 5.40)	PWR	10 years	48 GWd/MTU	850 watts
MGDS (Ref. 5.40)	BWR	10 years	49 GWd/MTU	409 watts
MPC (Ref. 5.39)	PWR	20 years	40 GWd/MTU	547 watts
MPC (Ref. 5.39)	BWR	20 years	40 GWd/MTU	265 watts
MPC Historic (Ref. 5.8)	PWR	10 years	40 GWd/MTU	718 watts

Design basis SNF will impact the timing of peak temperatures as well as the magnitude of the peak. The repository host rock temperatures will peak between 10 to 500 years depending on the thermal loading but will be largely independent of the individual waste package design. The waste package itself will experience its peak temperature before the rock temperature peaks. The peak temperature and its timing will depend on the design basis SNF and the basket/container design. In previous analyses of the large waste package (p. 6-108, Ref. 5.29), higher conductivity SNF baskets were seen to lower and delay the peak temperatures experienced. The choice of the design basis SNF is of key importance. Younger SNF types produce high peak temperatures within the first year which then drop off quickly. Older SNF (at the same initial APD, but not AML) produces lower and later peaks with more stable and higher long-term temperatures.

In the following evaluation, only the MGDS design basis BWR SNF type has been used to illustrate the cladding temperatures which the UCF waste package will produce when placed in the MGDS. The time dependence of the design basis BWR SNF heat load is provided in Attachment III as provided by the PHIA code using the data provided in Attachment 2 of reference 5.30. The PHIA code uses the data provided in assumption 4.3.4 and 4.3.5, sorts through the SNF decay heat data to obtain the correct heat generation rate versus time for the given SNF parameters, then interpolates as required to obtain the desired ANSYS time step intervals. The data is then written to an output file suitable for direct use by ANSYS. The PHIA code is provided as Attachment I, along with the input file from reference 5.30 as Attachment II, and the output file from PHIA as Attachment III.

7.3 2-D Waste Package Model Development

The general philosophy used for this analysis is to create a separate input file for each thermal loading case. Since there are only two major differences between individual cases, i.e., boundary condition and WP outer barrier for high and low thermal load, a base deck (High Thermal Load #1 Case) was created with the basic modeling information. The base deck was then copied for each ANSYS case. Each individual file then had the appropriate boundary condition file from reference 5.13 entered into the input decks. Finally, the Low Thermal Load cases then had the appropriate WP outer barrier material and thickness data entered into the input decks.

The basic layout of each deck follows the following pattern: 1) Comment header used to define problem modeled, additional files read by the input deck, and what information is contained in the data files used in the input deck. 2) Define model parameters and dimensions which are used repeatedly. This includes all material properties, reading of boundary condition files, reading of body load files, etc. The ANSYS input decks make use of defined variables which are then used to perform simple calculations concerning units conversions and geometric positions. Many of the UCF basket geometry parameters are reported in references 5.35 and 5.37 in units of millimeters. These values were entered into the ANSYS input decks along with the units conversion to meters, assigned a variable name, and the variable name was then used through out the remainder of the input deck to determine the geometry of the basket and the disposal container. Also, units of years are used in the file defining SNF heat loads. The years are converted to seconds for this analysis. The variables are clearly identified and defined via comments included in the ANSYS input deck. 3) Define element types which will be used to perform the solution. 4) Define the model geometry and mesh structure. The approach used is to define all components by first defining the basic key points, then lines, then areas and finally the mesh. A time consuming approach to input development, but it is easily followed and repeated. 5) Define all radiation surfaces and create radiation mesh matrix. The ANSYS AUX12 utility is used to generate all of the required view factors between radiation elements. 6) Apply the body loads and boundary conditions to the appropriate geometry components. Since this calculation is a transient, the loads and boundary conditions are applied at each time step. 7) Finally, selected positions in the SNF, basket, and disposal container shell were selected to have temperatures for each time step of the transient echoed to the output file for examination.

Each ANSYS input deck is provided as part of the ANSYS output files in Attachments XII, XIII, XIV, XV, and XVI. Heat and material input files are provided as Attachments III, IV, V and the boundary condition files for each thermal loading case is provided in Attachments VII through XI.

The development of any ANSYS model involves the following specific steps:

- 1) Identify the geometry to be modeled.
- 2) Identify the material properties which will be required.
- 3) Identify the assumptions used to model the real geometry and materials.
- 4) Identify the body loads (i.e., heat generation rates in specific materials).
- 5) Identify the boundary conditions/surface loads (i.e., surfaces with known or given temperatures).
- 6) Specify the problem as steady state or transient. If transient specify the time frame which is to be considered.
- 7) Execute the model generated to obtain solutions for the given conditions.
- 8) Analyze the results to form a conclusion or support a design thesis.

The creation of an ANSYS model for the 44 BWR UCF waste package conceptual design followed the listed steps. Discussion of some of these steps will be combined for convenience.

- 1) Identify the geometry to be modeled.
- 2) Identify the material properties which will be required.

The geometry and the material composition of each component is specified in references 5.31, 5.35, and 5.37 for the 44 BWR UCF waste package conceptual design (see assumptions 4.3.11 and 4.3.12). Notice that the high thermal load and low thermal load waste packages have different outer barrier thicknesses and material compositions. The high thermal loading disposal container is 0.020 meter thick Alloy 825 with an outer barrier of 0.100 meter thick A 516 carbon steel. The low thermal loading disposal container is 0.020 meter thick Alloy 825 with an outer barrier of 0.050 meter thick C71500 copper-nickel alloy.

Since this model is part of a larger calculational scheme as indicated in reference 5.13, a simple 2-D cross section of the UCF waste package will be modeled (see assumption 4.3.7). A vertical plane of symmetry is easily identified and thus, the geometry modeled will be that of the right hand side of the UCF waste package. The geometry is not modeled with quarter symmetry since the boundary condition, as specified in reference 5.13, indicates a vertical surface temperature distribution and requires half symmetry. Attachment VI provides mesh plots of the general layout of the waste package internals.

Material properties to be used for each component of the design are specified in Section 4.1 along with the references from which they were obtained. The ANSYS file containing this material property data is provided as Attachment IV (see assumptions 4.3.22, 4.3.23, 4.3.24, 4.3.25, 4.3.26, and 4.3.27). The effective thermal conductivity of the SNF assembly model areas is listed in reference 5.40 and is provided as Attachment V. The additional properties were developed in Section 4.3 (see assumptions 4.3.6, 4.3.28, and 4.3.29) and entered into the input

deck. Attachment IV also includes material properties which were not used in this analysis (i.e., those identified as material ID's 4, 5, 6, 8, 9, 10, 11, and 12 were not used).

- 3) Identify the assumptions used to model the real geometry and materials.

All assumptions used for this ANSYS model are listed in Section 4.3. These assumptions provide all of the required insight for a competent ANSYS user as to why the ANSYS geometry and material selections were entered into the ANSYS input decks in the given fashion (including assumptions 4.3.3, 4.3.10, 4.3.13, 4.3.14, 4.3.15, 4.3.16, 4.3.17, 4.3.18, 4.3.19, 4.3.20, 4.3.21).

- 4) Identify the body loads (i.e., heat generation rates in specific materials).
- 5) Identify the boundary conditions/surface loads (i.e., surfaces with known or given temperatures).
- 6) Specify the problem as steady state or transient. If transient specify the time frame which is to be considered.
- 7) Execute the model generated to obtain solutions for the given conditions.

The material which generates the heat load is the SNF and is modeled as a solid material placed in the interior of each tube. The heat load is dependant upon the design basis SNF selected and is discussed in Section 7.2. Briefly, the heat loads for the SNF areas were interpolated from the data provided in reference 5.30 for the assumed MGDS design basis SNF type. The heat load will decrease logarithmically with time as the fission products decay and; therefore, was created as a function of time. The heat loads were applied volumetrically and were multiplied by an axial heat peaking factor of 1.40 to approximate the axial center of the WP with a 2-D model (see assumption 4.3.8). An SNF assembly is much hotter at the mid-length than at the ends, and it is conservative to assume the 2-D waste package model represents the hottest cross-section of the UCF waste package.

As indicated in section 7.1, this analysis is part of a three part calculation method. As such the boundary conditions are provided by the calculations performed in reference 5.13. The boundary conditions for each repository thermal loading scenario was applied to the waste package surface as a temperature condition to create five ANSYS decks (see assumption 4.3.9). The boundary conditions are time dependent and the SNF heat generation rate is also time dependent; therefore, the problem is a transient. The boundary conditions and heat loads were applied and solved out to 1000 years for each of the five thermal loading scenarios described in Section 7.1 and for the BWR MGDS design basis SNF type described in Table 7.2-1. The transient time of 1000 years was performed to be consistent with the analysis performed in reference 5.13.

- 8) Analyze the results to form a conclusion or support an design thesis.

The outputs of each ANSYS execution are provided as Attachments XII through XVI. Discussion and summary of the ANSYS results are provided in Section 7.4 and conclusions are

provided in Section 8.0. Notice that selected data was requested in the input deck and echoed into the output file for ease of use. This data is summarized in Section 7.4.

7.4 2-D Waste Package Analysis Results

All of the results provided in this section were derived from the ANSYS V5.0A executions. These models are presented in the ANSYS output files summarized in Section 9.0 and provided as attachments to this report. All of the assumptions concerning geometry, material composition, boundary conditions, and other inputs are provided in Section 4.3.

To check the above SNF model preliminary results, the Wooton-Epstein correlation (reference 5.14) was applied for each of the cases. This empirically derived correlation was shown to be conservative in Section 3.6.2 of the BR-100 Spent Fuel Shipping Cask report (reference 5.38). The Wooton-Epstein correlation is described by Equation 7-1.

$$q'' = \sigma \frac{C_1}{\frac{1}{\epsilon_{cl}} + \frac{1}{\epsilon_{ba}} - 1} (T_{cl}^4 - T_{ba}^4) + C_2 (T_{cl} - T_{ba})^{\frac{4}{3}}$$

(Equation 7-1)

Where:

- q'' = heat flux from SNF based on the basket inner surface heat transfer area (Btu/hr-ft²)
- C_1 = constant depending on the spent fuel rod array size,
= $4N/(N+1)^2$ for odd N
= $4/(N+2)$ for even N
- C_2 = regression constant = 0.118
- N = number of fuel rods in a single row of a square spent fuel assembly
- T_{cl} = cladding surface temperature (absolute scale, °R)
- T_{ba} = basket surface temperature (absolute scale, °R)
- ϵ_{cl} = cladding surface emissivity
- ϵ_{ba} = basket surface emissivity
- σ = Stefan-Boltzmann constant (Btu/hr-ft²·°R⁴)

The correlation has two terms; one representing radiation heat transfer, and one representing gaseous convection in an array of heat producing rods. Because the cladding temperature occurs in both terms, the correlation must be solved iteratively. A complete description of the correlation development is given in the Wooton-Epstein paper (reference 5.14). For this analysis, the same material properties and conditions were assumed with the Wooton-Epstein correlation that were used in the ANSYS model (see assumption 4.3.4, 4.3.5, 4.3.6, 4.3.8, 4.3.16, 4.3.18, and 4.3.23):

Stefan-Boltzmann constant	1.714×10^{-9} (Btu/hr-ft ² ·°R ⁴)
Cladding emissivity	0.806 (0.002 inch oxidation layer, Ref. 5.40)
Basket emissivity	0.600 (Stainless Steel 316L)
Basket cell width	152.4 mm (6.0 inches)
SNF array size (N)	8 rods
Assembly active length	3810 mm (150.0 inches)
Axial peaking factor	1.40

The conservative peak cladding temperatures were calculated with the Wooton-Epstein correlation, the above values for required parameters, and the ANSYS calculated peak basket temperatures.

Tables 7.4-1 through 7.4-5 summarize the temperature data for each of the cases analyzed. Both "conservative" estimates of peak cladding temperatures using the Wooton-Epstein correlation, and "best estimate" predictions using the effective conductivity method are presented in the table. Peak cladding temperatures using effective conductivity are calculated directly in the ANSYS program, and Wooton-Epstein calculations for each time step in the ANSYS analysis were also performed for comparison.

The thermal history for each case is presented graphically in Figures 7.4-1 and 7.4-3 through 7.4-6. Figure 7.4-2 graphically presents the temperature profile from the center of the waste package to the drift wall at the time of peak cladding temperature for the 83 MTU/acre thermal loading case. The highest peak conservative estimate for SNF cladding temperature was 285°C which can be compared to the thermal goal of 350°C. The results show that a greater WP spacing results in lower near-field temperatures.

Peak temperatures inside the waste package occur between the time of emplacement and the time of peak drift wall temperatures. At emplacement the SNF heat load is at its highest, but the drift is still cool, and by the time of peak drift temperatures, the heat load has decayed so that internal temperature drops are lower. As indicated in Tables 7.4-1 through 7.4-5, the time of peak temperatures varies depending on thermal loading, WP spacing, and the time-dependent WP decay heat (SNF type). For most design basis SNF types, peak WP internal temperatures will occur in less than 5 years after emplacement even though waste package surface temperatures do not peak for 8 years or more. The timing and magnitude of the peak cladding temperatures experienced is very dependant upon the SNF basket design, the design basis SNF and the thermal loading conditions. By 100 years; however, the temperature drop across the WP (from center to edge using the effective thermal conductivity model) has dropped to less than 35°C.

While 83 MTU/acre (Figures 7.4-1 and 7.4-2) is considered a more likely scenario for a high thermal loading, a higher thermal loading of 100 MTU/acre (Figure 7.4-3) was also evaluated to bound the WP internal temperatures for the full range of possible thermal loadings. The combination of short WP spacing and high thermal loading resulted in the highest temperature of all of the cases. SNF cladding temperatures peaked at 270°C (285°C for Wooton-Epstein

correlation) and average repository horizon temperatures remained above 150°C past 1000 years. Calculations at LLNL (Ref. 5.32) have shown that above boiling conditions will persist for thousands of years at AMLs in this range; however, some thermal goals are close to upper limits.

Figure 7.4-4 displays the thermal history of the 44 BWR UCF waste package at 25 MTU/acre (6.2 kgU/m²) with the long WP spacing (low thermal loading #1) for the MGDS design basis SNF. Peak internal temperatures are lowest of all the cases due to the long WP spacing.

Figure 7.4-5 displays the thermal history of the 44 BWR UCF waste package for low thermal loading #2 and for the MGDS design basis SNF. Because the WP spacing is similar to that for high thermal loading #2, similar temperatures are predicted for the first few years of emplacement. However, as thermal loading effects emerge, all of the low thermal loading results converge.

Figure 7.4-6 displays the thermal history of the 44 BWR UCF waste package for low thermal loading #3 and for the MGDS design basis SNF. The highest internal temperature for all cases occurred where the MGDS design basis SNF is used and the shortest WP spacing (16.2 m) defines the thermal loading. The peak temperatures occur before drift-to-drift effects emerge such that WP spacing drives the near-field temperatures and high thermal loading #1 and low thermal loading #3 have nearly the same peak cladding temperature.

Table 7.4-1. High Thermal Load #1; 44 BWR UCF Waste Package Thermal Results

44 BWR UCF WP (all temperatures are in deg. C)
 100 MTU/acre with 16.165 m WP Spacing
 10 year old, 49 GWd/MTU burnup design basis SNF (WPD)

Time (years)	Heat Load (W/assy)	Peak SNF Temp.		ANSYS FEM Temperature Results (Deg. C)					
		Wooten-E	Eff Cond	Basket	WP Side	Drift Wall	1m Rock	3m Rock	Df Midpln
0	409.42	245	225	217	69	26	26	26	26
0.1	407.68	265	246	239	98	71	48	30	26
0.2	405.97	269	250	244	105	79	57	36	27
0.3	404.28	272	253	247	109	85	62	40	27
0.4	402.61	274	255	249	113	89	66	44	29
0.5	400.97	275	257	250	116	92	70	47	30
0.6	399.34	276	258	252	118	95	73	49	32
0.7	397.74	277	259	253	120	97	75	52	34
0.8	396.16	278	260	254	122	100	78	54	36
0.9	394.6	279	261	255	123	102	80	56	38
1	393.06	279	261	255	125	103	82	58	40
2	379.49	282	265	260	135	116	95	73	55
3	367.7	284	267	262	142	124	104	84	67
4	357.29	284	268	263	147	131	111	91	75
5	348.3	285	269	264	152	136	117	97	82
6	339.03	285	269	265	156	141	122	102	88
7	331	285	270	265	159	145	127	106	92
8	323.52	285	270	265	162	148	130	110	95
9	316.46	284	269	265	164	151	133	113	97
10	310.56	283	269	264	166	153	136	116	99
20	255.61	274	262	258	177	167	154	138	125
30	214.52	267	256	253	185	177	165	152	141
40	183.32	258	248	246	188	181	171	160	150
50	157.9	250	241	239	188	182	174	164	155
60	138.15	243	234	232	188	182	175	166	159
70	122.25	236	229	227	187	182	174	167	161
80	109.37	230	223	221	186	181	175	168	162
90	99.33	225	218	217	184	180	174	168	162
100	90.35	220	214	213	183	179	174	168	162
200	51.61	198	194	193	176	174	170	166	160
300	38.89	188	185	184	171	169	166	163	160
400	31.79	182	179	179	168	166	164	161	159
500	27.23	178	176	175	166	164	162	160	158
600	23.69	175	172	172	164	162	161	159	157
700	21.02	171	169	169	161	160	159	157	155
800	18.76	167	166	165	159	158	156	155	153
900	16.96	164	163	162	156	155	154	153	151
1000	15.49	161	160	159	154	153	152	151	149

Table 7.4-2. High Thermal Load #2; 44 BWR UCF Waste Package Thermal Results

44 BWR UCF WP (all temperatures are in deg. C)

83 MTU/acre with 19.477 m WP Spacing

10 year old, 49 GWd/MTU burnup design basis SNF (WPD)

Time (years)	Heat Load (W/assy)	Peak SNF Temp.		ANSYS FEM Temperature Results (Deg. C)					
		Wooten-E	Eff Cond	Basket	WP Side	Drift Wall	1m Rock	3m Rock	Df Midpin
0	409.42	245	224	216	69	26	26	26	26
0.1	407.68	264	244	237	97	69	47	30	26
0.2	405.97	268	248	242	102	76	55	35	27
0.3	404.28	270	251	244	106	81	60	39	27
0.4	402.61	271	252	246	109	84	63	42	29
0.5	400.97	272	253	247	111	87	66	45	30
0.6	399.34	273	254	248	113	89	69	47	32
0.7	397.74	273	255	249	114	91	71	49	33
0.8	396.16	274	256	249	116	93	73	51	35
0.9	394.6	274	256	250	117	95	74	53	36
1	393.06	275	257	250	118	96	76	55	38
2	379.49	277	259	253	127	107	88	67	51
3	367.7	277	260	255	134	115	96	77	61
4	357.29	277	261	255	138	120	102	84	69
5	348.3	277	261	256	142	125	107	89	75
6	339.03	277	261	256	145	129	112	94	80
7	331	276	260	255	148	132	115	98	85
8	323.52	275	260	255	150	135	119	101	89
9	316.46	274	259	254	152	137	121	104	92
10	310.56	273	258	254	153	139	123	106	94
20	255.61	260	247	243	160	149	136	122	109
30	214.52	249	237	234	164	155	144	132	122
40	183.32	239	228	225	165	157	148	138	129
50	157.9	229	220	217	165	157	150	141	134
60	138.15	221	213	210	164	158	151	143	136
70	122.25	215	206	204	163	158	151	144	138
80	109.37	208	201	199	162	156	151	144	139
90	99.33	203	196	194	160	156	150	144	139
100	90.35	198	192	190	159	155	150	144	139
200	51.61	176	172	170	152	150	146	143	138
300	38.89	166	163	162	148	146	143	141	138
400	31.79	161	158	157	146	144	142	139	138
500	27.23	157	154	154	144	142	140	138	137
600	23.69	153	151	150	142	140	139	137	135
700	21.02	150	148	147	140	138	137	135	134
800	18.76	147	145	145	138	137	135	134	133
900	16.96	145	143	143	136	135	134	133	132
1000	15.49	143	141	141	135	134	133	132	131

Table 7.4-3. Low Thermal Load #1; 44 BWR UCF Waste Package Thermal Results

44 BWR UCF WP (all temperatures are in deg. C)
 25 MTU/acre with 32.331 m WP Spacing
 10 year old, 49 GWd/MTU burnup design basis SNF (WPD)

Time (years)	Heat Load (W/assy)	Peak SNF Temp.		ANSYS FEM Temperature Results (Deg. C)					
		Wooten-E	Eff Cond	Basket	WP Side	Drift Wall	1m Rock	3m Rock	Df Midpln
0	409.42	245	224	216	69	26	26	26	26
0.1	407.68	262	242	235	94	66	46	30	26
0.2	405.97	265	245	238	99	72	52	35	26
0.3	404.28	266	247	240	101	75	56	38	26
0.4	402.61	267	247	241	103	77	59	40	26
0.5	400.97	267	248	241	104	79	61	42	26
0.6	399.34	267	248	242	106	80	62	44	26
0.7	397.74	267	248	242	107	82	64	45	26
0.8	396.16	267	249	242	107	83	65	46	26
0.9	394.6	267	249	242	108	84	66	47	26
1	393.06	267	249	241	109	84	67	48	26
2	379.49	265	247	241	112	89	72	54	28
3	367.7	263	245	239	114	92	75	58	30
4	357.29	260	242	236	115	94	77	60	32
5	348.3	257	240	234	116	95	79	62	34
6	339.03	255	238	232	116	96	80	63	36
7	331	252	235	229	117	97	81	65	38
8	323.52	250	233	227	117	97	82	66	39
9	316.46	247	231	225	117	98	83	67	41
10	310.56	245	229	223	117	98	83	68	42
20	255.61	224	209	204	114	97	87	74	52
30	214.52	206	192	188	111	97	86	76	58
40	183.32	191	178	174	108	95	86	77	61
50	157.9	178	166	162	104	93	85	77	63
60	138.15	167	156	153	102	91	84	77	64
70	122.25	158	148	145	99	90	84	77	65
80	109.37	150	141	138	97	88	82	76	66
90	99.33	144	135	133	95	87	82	76	66
100	90.35	139	130	128	93	86	81	75	67
200	51.61	113	107	105	85	80	77	73	68
300	38.89	103	98	97	81	77	75	72	68
400	31.79	97	93	92	79	76	74	71	68
500	27.23	93	89	88	77	74	73	71	68
600	23.69	90	86	85	76	73	72	70	67
700	21.02	87	84	83	75	72	71	69	67
800	18.76	84	82	81	73	71	70	69	66
900	16.96	82	80	79	72	70	69	68	66
1000	15.49	81	78	78	71	70	68	67	65

Table 7.4-4. Low Thermal Load #2; 44 BWR UCF Waste Package Thermal Results

44 BWR UCF WP (all temperatures are in deg. C)
 25 MTU/acre with 21.554 m WP Spacing
 10 year old, 49 GWd/MTU burnup design basis SNF (WPD)

Time (years)	Heat Load (W/assy)	Peak SNF Temp.		ANSYS FEM Temperature Results (Deg. C)					
		Wooten-E	Eff Cond	Basket	WP Side	Drift Wall	1m Rock	3m Rock	Df Midpln
0	409.42	245	224	216	69	26	26	26	26
0.1	407.68	263	243	236	96	68	47	30	26
0.2	405.97	266	247	240	101	74	54	35	26
0.3	404.28	268	249	242	104	79	58	39	26
0.4	402.61	269	250	244	107	82	62	41	26
0.5	400.97	270	251	245	109	84	64	44	26
0.6	399.34	271	252	245	111	86	66	46	26
0.7	397.74	271	253	246	112	88	68	48	26
0.8	396.16	271	253	246	113	90	70	49	26
0.9	394.6	272	253	247	114	91	71	50	26
1	393.06	272	254	247	115	92	73	52	26
2	379.49	272	254	247	122	100	81	60	26
3	367.7	271	253	247	125	105	86	66	27
4	357.29	269	251	246	127	107	89	69	28
5	348.3	267	250	244	128	109	92	72	29
6	339.03	264	248	242	129	111	93	74	30
7	331	262	246	240	130	112	95	76	31
8	323.52	260	244	238	130	113	96	77	33
9	316.46	257	241	236	130	113	97	78	34
10	310.56	255	239	234	130	112	97	79	35
20	255.61	233	219	214	127	112	98	84	46
30	214.52	215	202	197	122	110	98	84	52
40	183.32	199	186	182	117	106	96	84	56
50	157.9	185	173	170	113	103	94	84	59
60	138.15	174	163	160	109	100	92	83	61
70	122.25	164	154	151	106	97	90	82	62
80	109.37	156	147	144	103	95	88	81	63
90	99.33	149	141	138	101	93	87	80	64
100	90.35	144	135	133	99	92	86	79	64
200	51.61	116	110	109	88	83	80	76	67
300	38.89	105	101	99	84	80	77	74	67
400	31.79	99	95	94	81	78	76	73	67
500	27.23	95	91	90	79	76	74	72	67
600	23.69	91	88	87	78	75	73	71	67
700	21.02	88	85	85	76	74	72	70	66
800	18.76	86	83	82	75	73	71	70	66
900	16.96	84	81	80	74	72	70	69	65
1000	15.48	82	79	79	73	71	69	68	65

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Table 7.4-5. Low Thermal Load #3; 44 BWR UCF Waste Package Thermal Results

44 BWR UCF WP (all temperatures are in deg. C)
 25 MTU/acre with 16.165 m WP Spacing
 10 year old, 49 GWd/MTU burnup design basis SNF (WPD)

Time (years)	Heat Load (W/assy)	Peak SNF Temp.		ANSYS FEM Temperature Results (Deg. C)					
		Wooten-E	Eff Cond	Basket	WP Side	Drift Wall	1m Rock	3m Rock	Dr Midpln
0	409.42	245	224	216	69	26	26	26	26
0.1	407.68	265	245	238	98	71	48	30	26
0.2	405.97	269	250	243	105	79	57	36	26
0.3	404.28	271	253	246	109	85	62	40	26
0.4	402.61	273	255	248	113	89	66	43	26
0.5	400.97	275	256	250	116	92	70	46	26
0.6	399.34	276	257	251	118	95	73	49	26
0.7	397.74	277	258	252	120	97	75	51	26
0.8	396.16	277	259	253	121	99	77	53	26
0.9	394.6	278	260	254	123	101	79	55	26
1	393.06	278	260	254	124	103	81	57	26
2	379.49	280	263	257	133	113	92	68	26
3	367.7	280	263	257	138	119	98	75	26
4	357.29	279	262	257	141	123	102	79	26
5	348.3	277	261	256	143	126	106	83	27
6	339.03	275	259	254	144	128	108	86	27
7	331	273	258	253	145	129	110	88	28
8	323.52	272	256	251	146	130	111	90	29
9	316.46	270	254	249	146	131	113	91	29
10	310.56	268	252	248	146	131	113	92	30
20	255.61	247	233	228	143	131	113	97	39
30	214.52	227	214	211	138	126	113	97	46
40	183.32	210	198	195	131	121	109	96	51
50	157.9	195	184	181	125	116	106	94	55
60	138.15	183	173	170	120	112	102	92	57
70	122.25	173	163	160	116	108	100	90	59
80	109.37	164	155	152	112	104	97	88	60
90	99.33	157	148	146	109	102	95	87	61
100	90.35	150	142	140	106	100	93	85	62
200	51.61	120	114	113	93	88	84	80	65
300	38.89	109	104	103	87	84	80	77	66
400	31.79	102	98	97	84	81	78	75	66
500	27.23	97	94	93	82	79	77	74	66
600	23.69	93	90	89	80	77	75	73	66
700	21.02	90	87	87	78	76	74	72	66
800	18.76	88	85	84	77	74	73	71	65
900	16.96	85	83	82	75	73	72	70	65
1000	15.49	83	81	80	74	72	71	69	64

Figure 7.4-1. 44 BWR UCF Temperatures, High Thermal Load #2 (83 MTU/Acre)

Figure 7.4-2. Temperature Profile, 44 BWR UCF

Figure 7.4-3. 44 BWR UCF Temperatures, High Thermal Load #1 (100 MTU/Acre)

Figure 7.4-4. 44 BWR UCF Temperatures, Low Thermal Load #1 (25 MTU/Acre 32.3 m)

Figure 7.4-5. 44 BWR UCF Temperatures, Low Thermal Load #2 (25 MTU/Acre 21.6 m)

Figure 7.4-6. 44 BWR UCF Temperatures, Low Thermal Load #3 (25 MTU/Acre 16.2 m)

8. Conclusions

Table 8-1 summarizes the peak temperatures and the time of occurrence for each of the cases analyzed. The thermal loading scenarios indicated in Table 8-1 are defined in Table 7.1-1, and the design basis SNF descriptions are provided in Table 7.2-1. Both "conservative" estimates of peak cladding temperatures using the Wootton-Epstein correlation and "best estimate" predictions using the effective conductivity method are presented in the table. Peak cladding temperatures using effective conductivity are calculated directly in the ANSYS program, and Wootton-Epstein calculations for each time step in the ANSYS analysis were also performed for comparison.

Table 8-1. 44 BWR UCF Thermal Analysis Results Summary

Thermal Load	Design Basis SNF	Peak Cladding				Peak Basket		WP Surface	
		Cons. Est.		Best Est.					
		°C	yrs	°C	yrs	°C	yrs	°C	yrs
High #1	MGDS	285	5	270	8	265	8	188	50
High #2	MGDS	277	4	261	5	256	5	165	40
Low #1	MGDS	267	0.8	249	0.9	242	1	117	8
Low #2	MGDS	272	2	254	2	248	2	131	8
Low #3	MGDS	280	2	263	2	257	3	146	10

The repository thermal loading has not been specified by the MGDS program and will not be finally established for years. Therefore, the thermal evaluation of the 44 BWR UCF WP conceptual design with respect to the repository has considered a number of thermal loading scenarios. For each repository thermal loading scenario, a 3-D repository emplacement (Ref. 5.13) and 2-D waste package evaluation were performed. As indicated by the data provided in Table 8-1, the peak SNF cladding temperatures remain below 350°C and the temperatures for the materials used in the UCF WP conceptual designs are not such that melting or rapid mechanical failure would occur.

The results of the thermal evaluations indicate that the 44 BWR UCF WP conceptual design can satisfy the thermal limitations (i.e., goals) specified in Section 4.2.5 during normal expected conditions for disposal in the MGDS and; therefore, has a reasonable chance to meet the MGDS requirements for permanent disposal. Thus, the UCF WP conceptual design may be used as a point of departure for analysis of design changes put forth by the UCF WP designers. However, two points should be noted: 1) more analysis is required to determine conditions for anticipated off-normal conditions and drift backfill; and 2) this analysis relies on unqualified design inputs. These items need to be considered by any work which uses these results.

```

/*phia.cpp Package Heat Input to ANSYS. Calculates heat as a
function of age, burnup, and initial enrichment which are input by the user.
If the user enters the value 0 for initial enrichment, the program calculates
the average initial enrichment expected for the input value of burnup
(based on the actual and EIA forecast of fuel loading and discharge
characteristics). The heat is evaluated and output for a series of times
up to 10,000 years, pre-selected to be most appropriate for input to ANSYS
temperature calculations of the waste package emplaced in the repository.
The heat calculation is performed by interpolation in a table of heat values
for specified values of age, burnup, and initial enrichment for both PWR
and BWR fuel types.
//subroutines, which are delivered by Systems Analysis Vienna in a
//compiled form and linked with the command
// [path]link heat.obj getheat.obj phia00b.obj,;,;
*/
#include <conio.h>
#include <stdio.h>
#include <math.h>
#include <stdlib.h>
#include <float.h>
#include <string.h>
#include <ctype.h>
#include <time.h>
#include <graph.h>
#include "heat.h"

int bmatch=0;    //for testing match of input burnup value
Heat h;          //heat computation (interpolation) object (subroutine)
                //of GetHeat class
float icheck(float,float,float,int); //Sanity check for data input
void buildref(); //Builds reference table for interpolating enrichment
float refburnup[7][2], //Burnup values from which interpolation gives
                //expected enrichment
    assay[7][2][3], //Enrichment values from which interpolation gives
                //expected enrichment
    getfloat(char*,int,int);

void main()
{long int i,j,k, //Temporary variables for indexing and looping
    maxtime,    //emplacement age plus 10,000
    short type; //Fueotype from user input (BWR=>0; PWR=>P
    float x,    //Computed expected enrichment, if user inputs a=0
    burnup,    //User input burnup
    mtupassy,  //User input MTU/assy
    age,       //User input age at emplacement
    a,         //User input initial enrichment
    time,      //Age points at which heat is computed and output
    eps=.00001, //Used to avoid testing for equality of floating point numbers
    times[]={.1, 1.0, 10.0, 100.0, 1000.0, 10000.0}, //times to shift
                //time increments
    dtimes[]={.01, .05, .5, 5, 50, 500}; //Time increments for the above shift
                //times
    unsigned int num, //Index for main output loop
    total, //Counts the cumulative number of output heat values,
    //used for output at the head of each line
    cycle; //Counter for times[] and dtimes[]
    char buf[80], //Variable to receive output file name
    c, datestr[15], numstr[3];
    FILE *fout,*ferr;
    buildref();
    ferr=fopen("junk.e","w");
    _clearscreen(_GCLEARSCREEN);
    printf("*****\n");
    printf("*** Package Heat Input to ANSYS (PHIA) **\n");
    printf("*** Enter the following parameters, separated by blanks, CR at end. **\n");
    printf("*** **\n");
    printf("*** Age at emplacement in years (must be greater than 1) **\n");
    printf("*** Burnup (MWD/MTU), 10000<=burnup<=60000 for PWR **\n");
    printf("*** 7500<=burnup<=50000 for BWR **\n");
    printf("*** Enrichment in percent (zero if you wish to use average) **\n");

```

```

printf("*** Fuel Type (BWR=b, PWR=p) **\n");
printf("*** Mass of fuel per assembly (MTU/assy) **\n");
printf("*** **\n");
printf("*** Typical example: 5 35000 3.75 p .43 **\n");
printf("*****\n");
num=scanf("%f %f %f %c %f",&age,&burnup,&a,&c,&mtupassy);
type=(tolower(c)=='b')?0:1;
x=ichk(age,burnup,a,type);
printf("\nEnter name of file for output\n");
scanf("%s",buf);
while((fout=fopen(buf,"w"))==NULL)
    {printf("Please enter a valid filename.\n");
    scanf("%s",buf);}
maxtime=age+10000;
_strdate(datestr);
fprintf(fout,"/COM, ");
fprintf(fout,"*****\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** History of SNF Assembly Heat Generation Rates **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Output of PHIA, SCS1: 800000000-01717-1200-3000X Rev.00B **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Executable File Name: PHIA00B.EXE **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Output File Name: %-12s%22s**\n",buf," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Execution Date: %-12s%22s**\n",datestr," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Start Age (years): %-12.1f%22s**\n",age," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Decay Period (years): %-12d%22s**\n",10000," ");
if(a==0)
    {fprintf(fout,"/COM, ");
    fprintf(fout,"*** Default average enrichment for the burnup specified **\n");}
fprintf(fout,"/COM, ");
fprintf(fout,"*** Enrichment (percent): %-12.2f%22s**\n",
    (a>0)?a:x," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Burnup (MWd/MTU): %-12.0f%22s**\n",burnup," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** Assembly Type: %-12s%22s**\n",
    (type==0)?"BWR":"PWR"," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** SNF U Mass (MTU/assy): %-12.3f%22s**\n",mtupassy," ");
fprintf(fout,"/COM, ");
fprintf(fout,"*** **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** ASSY(#,1) is the SNF assembly heat in Watts. **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*** ASSY(#,0) is the time post emplacement in years. **\n");
fprintf(fout,"/COM, ");
fprintf(fout,"*****\n");
time=.000001;
fprintf(fout,"ASSY( 1,1)=%9.2f",
    mtupassy*h.GetHeat(age+time,type,burnup,a));

num=1;
total=1;
cycle=0;
time=0;
while(time<10000) //Main output loop
    {total++;
    if(time>=times[cycle]-eps)cycle++;
    time+=dtimes[cycle];
    fprintf(fout,"%9.2f",mtupassy*h.GetHeat(age+time,type,burnup,a));
    if(num<5)num++;
    else
        {if(time<10000)fprintf(fout,"\nASSY(%2u,1)=",total+1);
        num=0;}}

```

```

fprintf(fout, "\n");
fprintf(fout, "ASSY( 1,0)=%9.6f", 1.e-6);
num=1;
total=1;
cycle=0;
time=0;
while(time<10000)
{
    total++;
    fprintf(ferr, "%d %f %f\n", cycle, time, times[cycle]);
    if(time>=times[cycle]-eps) cycle++;
    time+=dtimes[cycle];
    fprintf(fout, "%9.2f", time);
    if(num<5) num++;
    else
        {if(time<10000) fprintf(fout, "\nASSY(%2u,0)=", total+1);
         num=0;}}
fprintf(fout, "\n");
fprintf(fout, "ASSY( 0,1)=1.0\n");
fprintf(fout, "/COM, ");
fprintf(fout, "*****\n");
fprintf(fout, "/EOF\n");

```

```

//This routine checks the input values for age, burnup, and enrichment
//for sanity. It also calculates the expected enrichment (for the input
//values of fueltype and burnup) if the user inputs 0.
float icheck(float age, float burn, float rich, int type)
{int i=0, j=0;
 float x;
 if(age<1) //Age must be at least 1 yr (by present law at least 5)
 {printf("Age cannot be less than 1. Please try again\n");
  exit(0);}
 if(burn>refburnup[5][type]) //Must fall within burnup range of heat value table
 {printf("Burnup too high, please try again\n");
  exit(0);}
 if(burn<refburnup[0][type])
 {printf("Burnup too low, please try again\n");
  exit(0);}
 while((i<5)&&(burn>refburnup[i][type]+1)) i++;
 if (burn==refburnup[i][type]) bmatch=1;
 if(rich>0)
 {if((bmatch==1)&&((rich<assay[i][type][0])||(rich>assay[i][type][2])))
 {printf("Enrichment must be between %-.3f and %-.3f\n",
  assay[i][type][0], assay[i][type][2]);
  printf("Please try again\n");
  exit(0);}
 else if((bmatch==0)&&((rich<assay[i][type][0])||(rich>assay[i-1][type][2])))
 {printf("Enrichment must be between %-.3f and %-.3f\n",
  assay[i][type][0], assay[i-1][type][2]);
  printf("
  Please try again\n");
  exit(0);}}
 if(rich==0) //Compute expected enrichment for this burnup
 if (bmatch==1) return(assay[i][type][1]); //If match, no need to interpolate
 else //Otherwise, interpolate
 {x=assay[i-1][type][1]+(burn-refburnup[i-1][type])*
  (assay[i][type][1]-assay[i-1][type][1])/
  (refburnup[i][type]-refburnup[i-1][type]);
  return(x);}
 return(0);}

```

```

//This routine builds the reference table used to check the sanity of
//the burnup and enrichment values input by the user, and to calculate
//the expected enrichment if the user enters the value 0.
void buildref()
{int i,j,k; //indexes for arrays in iteration loops
 char buf[300], //Buffer for reading data table input line
 c; //Variable to test fueltype
 FILE *fin;
 if ((fin=fopen("heatdat.dat", "r"))==NULL)

```

```
{printf("Cant open heatdat\n");exit(0);}
j=0;k=0;i=0;
while(fgets(buf,300,fin)!=NULL)
  if(((c=buf[0])=='B')||(c=='P'))//Test whether this line has reference values
    {j=(c=='B')?0:1; //If so, read them.
      refburnup[i][j]=getfloat(buf,4,7);
      assay[i][j][k]=getfloat(buf,13,5);
      if(++k>2)
        {k=0;
          i++;}
      if(i>5)i=0;}
fclose(fin);}

//routine to read a float from a character string
float getfloat(char string[300], int start, int length)
{char temp[20];
  int i,j;
  for(i=start;i<start+length;i++) temp[i-start]=string[i];
  temp[length]='\0';
  return(atof(temp));}
```


-503800 .121756 -.001018		.196200 .121756 -.001018		.896200 .121756 -.001018		.169400 .085366 -.000351		.889400 .085366 -.000351		1.569400 .085366 -.000351											
SA TOTAL HEAT 92		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
		21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
		41.	42.	43.	44.	45.	46.	47.	48.	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.	60.
		61.	62.	63.	64.	65.	66.	67.	68.	69.	70.	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.
		81.	82.	83.	84.	85.	86.	87.	88.	89.	90.	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.
		101.	102.	103.	104.	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.	115.	116.	117.	118.	119.	120.
		121.	122.	123.	124.	125.	126.	127.	128.	129.	130.	140.	150.	200.	250.	300.	400.	500.	700.	1000.	1500.
		2000.	2500.	3000.	4000.	5000.	7000.	10000.	20000.	50000.	100000.										
BWR 7500.	.72	4.081E+03	1.881E+03	1.062E+03	6.797E+02	4.958E+02	4.005E+02	3.494E+02	3.198E+02	3.009E+02	2.887E+02	2.786E+02	2.712E+02	2.652E+02	2.600E+02	2.561E+02	2.515E+02	2.478E+02	2.443E+02	2.411E+02	2.385E+02
		2.351E+02	2.323E+02	2.297E+02	2.272E+02	2.247E+02	2.223E+02	2.200E+02	2.177E+02	2.155E+02	2.137E+02	2.113E+02	2.092E+02	2.072E+02	2.052E+02	2.032E+02	2.012E+02	1.993E+02	1.975E+02	1.956E+02	1.938E+02
		1.920E+02	1.903E+02	1.885E+02	1.868E+02	1.851E+02	1.835E+02	1.819E+02	1.803E+02	1.787E+02	1.776E+02	1.757E+02	1.742E+02	1.727E+02	1.713E+02	1.699E+02	1.685E+02	1.671E+02	1.658E+02	1.645E+02	1.632E+02
		1.619E+02	1.606E+02	1.594E+02	1.581E+02	1.569E+02	1.558E+02	1.546E+02	1.534E+02	1.523E+02	1.512E+02	1.501E+02	1.490E+02	1.480E+02	1.470E+02	1.459E+02	1.449E+02	1.439E+02	1.430E+02	1.420E+02	1.411E+02
		1.402E+02	1.393E+02	1.384E+02	1.375E+02	1.366E+02	1.358E+02	1.350E+02	1.341E+02	1.333E+02	1.326E+02	1.318E+02	1.310E+02	1.303E+02	1.295E+02	1.288E+02	1.281E+02	1.274E+02	1.267E+02	1.260E+02	1.253E+02
		1.248E+02	1.242E+02	1.235E+02	1.229E+02	1.223E+02	1.217E+02	1.211E+02	1.205E+02	1.200E+02	1.194E+02	1.188E+02	1.183E+02	1.178E+02	1.173E+02	1.168E+02	1.162E+02	1.157E+02	1.153E+02	1.148E+02	1.143E+02
		1.138E+02	1.134E+02	1.129E+02	1.125E+02	1.120E+02	1.116E+02	1.112E+02	1.107E+02	1.103E+02	1.099E+02	1.095E+02	1.061E+02	1.028E+02	9.135E+01	8.352E+01	7.753E+01	6.751E+01	5.945E+01	4.672E+01	3.404E+01
		1.710E+01	1.442E+01	1.303E+01	1.166E+01	1.092E+01	9.672E+00	8.278E+00	5.243E+00	1.971E+00	5.958E-01										
BWR 7500.	1.05	3.656E+03	1.651E+03	9.297E+02	5.970E+02	4.382E+02	3.564E+02	3.128E+02	2.874E+02	2.711E+02	2.602E+02	2.511E+02	2.443E+02	2.386E+02	2.337E+02	2.296E+02	2.253E+02	2.216E+02	2.181E+02	2.148E+02	2.120E+02
		2.086E+02	2.058E+02	2.031E+02	2.005E+02	1.979E+02	1.955E+02	1.930E+02	1.907E+02	1.884E+02	1.864E+02	1.840E+02	1.819E+02	1.798E+02	1.777E+02	1.757E+02	1.737E+02	1.718E+02	1.699E+02	1.680E+02	1.662E+02
		1.644E+02	1.626E+02	1.608E+02	1.591E+02	1.575E+02	1.558E+02	1.542E+02	1.526E+02	1.510E+02	1.498E+02	1.480E+02	1.465E+02	1.451E+02	1.437E+02	1.423E+02	1.409E+02	1.396E+02	1.383E+02	1.370E+02	1.357E+02
		1.344E+02	1.332E+02	1.320E+02	1.308E+02	1.297E+02	1.285E+02	1.274E+02	1.263E+02	1.252E+02	1.242E+02	1.231E+02	1.221E+02	1.211E+02	1.201E+02	1.191E+02	1.182E+02	1.172E+02	1.163E+02	1.154E+02	1.145E+02
		1.137E+02	1.128E+02	1.120E+02	1.112E+02	1.104E+02	1.096E+02	1.088E+02	1.080E+02	1.073E+02	1.065E+02	1.058E+02	1.051E+02	1.044E+02	1.037E+02	1.030E+02	1.024E+02	1.017E+02	1.011E+02	1.005E+02	1.002E+02
		9.940E+01	9.880E+01	9.822E+01	9.765E+01	9.709E+01	9.654E+01	9.601E+01	9.548E+01	9.496E+01	9.445E+01	9.395E+01	9.346E+01	9.297E+01	9.250E+01	9.203E+01	9.157E+01	9.112E+01	9.068E+01	8.981E+01	8.881E+01
		8.939E+01	8.897E+01	8.857E+01	8.817E+01	8.777E+01	8.738E+01	8.700E+01	8.663E+01	8.626E+01	8.590E+01	8.557E+01	8.527E+01	8.497E+01	8.468E+01	8.439E+01	8.410E+01	8.381E+01	8.352E+01	8.323E+01	8.294E+01
		1.478E+01	1.274E+01	1.165E+01	1.054E+01	9.917E+00	8.826E+00	7.587E+00	4.868E+00	1.859E+00	5.676E-01										
BWR 7500.	1.75	3.385E+03	1.494E+03	8.399E+02	5.430E+02	4.057E+02	3.324E+02	2.946E+02	2.722E+02	2.576E+02	2.475E+02	2.388E+02	2.321E+02	2.262E+02	2.209E+02	2.165E+02	2.118E+02	2.077E+02	2.038E+02	2.001E+02	1.967E+02
		1.928E+02	1.896E+02	1.866E+02	1.836E+02	1.806E+02	1.776E+02	1.750E+02	1.723E+02	1.696E+02	1.672E+02	1.644E+02	1.620E+02	1.596E+02	1.572E+02	1.549E+02	1.527E+02	1.505E+02	1.483E+02	1.462E+02	1.442E+02
		1.422E+02	1.402E+02	1.382E+02	1.364E+02	1.345E+02	1.327E+02	1.309E+02	1.291E+02	1.274E+02	1.260E+02	1.241E+02	1.225E+02	1.209E+02	1.194E+02	1.179E+02	1.164E+02	1.150E+02	1.136E+02	1.122E+02	1.108E+02
		1.095E+02	1.082E+02	1.069E+02	1.057E+02	1.044E+02	1.032E+02	1.020E+02	1.009E+02	9.978E+01	9.856E+01	9.757E+01	9.650E+01	9.546E+01	9.443E+01	9.343E+01	9.245E+01	9.149E+01	9.055E+01	8.962E+01	8.872E+01
		8.783E+01	8.696E+01	8.611E+01	8.527E+01	8.444E+01	8.366E+01	8.287E+01	8.210E+01	8.135E+01	8.061E+01	7.989E+01	7.918E+01	7.848E+01	7.780E+01	7.714E+01	7.648E+01	7.584E+01	7.521E+01	7.460E+01	7.416E+01
		7.350E+01	7.291E+01	7.234E+01	7.179E+01	7.124E+01	7.071E+01	7.018E+01	6.967E+01	6.917E+01	6.868E+01	6.819E+01	6.772E+01	6.725E+01	6.680E+01	6.635E+01	6.591E+01	6.548E+01	6.506E+01	6.465E+01	6.424E+01
		6.384E+01	6.345E+01	6.307E+01	6.269E+01	6.232E+01	6.196E+01	6.161E+01	6.126E+01	6.092E+01	6.058E+01	6.025E+01	5.993E+01	5.961E+01	5.930E+01	5.899E+01	5.868E+01	5.838E+01	5.808E+01	5.778E+01	5.748E+01
		1.181E+01	1.049E+01	9.762E+00	8.954E+00	8.457E+00	7.572E+00	6.561E+00	4.300E+00	1.699E+00	5.527E-01										
BWR 15000.	1.09	5.818E+03	2.853E+03	1.698E+03	1.144E+03	8.692E+02	7.198E+02	6.362E+02	5.848E+02	5.506E+02	5.277E+02	5.074E+02	4.924E+02	4.799E+02	4.691E+02	4.611E+02	4.511E+02	4.431E+02	4.357E+02	4.288E+02	4.236E+02
		4.160E+02	4.100E+02	4.043E+02	3.988E+02	3.934E+02	3.883E+02	3.832E+02	3.783E+02	3.735E+02	3.702E+02	3.650E+02	3.605E+02	3.561E+02	3.518E+02	3.477E+02	3.436E+02	3.396E+02	3.357E+02	3.319E+02	3.281E+02
		3.244E+02	3.208E+02	3.173E+02	3.138E+02	3.104E+02	3.070E+02	3.037E+02	3.005E+02	2.973E+02	2.951E+02	2.914E+02	2.883E+02	2.854E+02	2.825E+02	2.797E+02	2.770E+02	2.743E+02	2.716E+02	2.690E+02	2.664E+02
		2.639E+02	2.615E+02	2.591E+02	2.567E+02	2.543E+02	2.520E+02	2.498E+02	2.476E+02	2.454E+02	2.433E+02	2.412E+02	2.391E+02	2.371E+02	2.352E+02	2.332E+02	2.313E+02	2.294E+02	2.276E+02	2.258E+02	2.240E+02
		2.223E+02	2.206E+02	2.189E+02	2.173E+02	2.156E+02	2.141E+02	2.125E+02	2.110E+02	2.095E+02	2.080E+02	2.065E+02	2.051E+02	2.037E+02	2.024E+02	2.010E+02	1.997E+02	1.984E+02	1.971E+02	1.959E+02	1.954E+02
		1.939E+02	1.926E+02	1.914E+02	1.902E+02	1.891E+02	1.880E+02	1.869E+02	1.859E+02	1.848E+02	1.838E+02	1.828E+02	1.818E+02	1.808E+02	1.798E+02	1.789E+02	1.780E+02	1.770E+02	1.761E+02	1.753E+02	1.744E+02
		1.735E+02	1.727E+02	1.719E+02	1.711E+02	1.703E+02	1.695E+02	1.687E+02	1.679E+02	1.672E+02	1.664E+02	1.596E+02	1.538E+02	1.339E+02	1.208E+02	1.114E+02	9.586E+01	8.388E+01	6.511E+01	4.669E+01	2.990E+01
		2.218E+01	1.855E+01	1.638E+01	1.447E+01	1.348E+01	1.182E+01	1.002E+01	6.163E+00	2.278E+00	7.455E-01										
BWR 15000.	1.79	5.359E+03	2.613E+03	1.553E+03	1.054E+03	8.094E+02	6.775E+02	6.085E+02	5.577E+02	5.269E+02	5.055E+02	4.870E+02	4.728E+02	4.608E+02	4.502E+02	4.418E+02	4.323E+02	4.242E+02	4.167E+02	4.096E+02	4.037E+02
		3.963E+02	3.901E+02	3.841E+02	3.783E+02	3.728E+02	3.673E+02	3.621E+02	3.569E+02	3.519E+02	3.478E+02	3.424E+02	3.377E+02	3.331E+02	3.285E+02	3.242E+02	3.199E+02	3.158E+02	3.116E+02	3.078E+02	3.037E+02
		2.998E+02	2.960E+02	2.923E+02	2.887E+02	2.851E+02	2.816E+02	2.781E+02	2.748E+02	2.715E+02	2.680E+02	2.651E+02	2.620E+02	2.589E+02	2.559E+02	2.530E+02	2.502E+02	2.474E+02	2.446E+02	2.420E+02	2.393E+02
		2.367E+02	2.342E+02	2.317E+02	2.292E+02	2.268E+02	2.245E+02	2.222E+02	2.199E+02	2.177E+02	2.155E+02	2.134E+02	2.113E+02	2.092E+02	2.072E+02	2.052E+02	2.033E+02	2.014E+02	1.995E+02	1.977E+02	1.959E+02
		1.941E+02	1.924E+02	1.907E+02	1.890E+02	1.874E+02	1.858E+02	1.842E+02	1.827E+02	1.812E+02	1.797E+02	1.783E+02	1.768E+02	1.754E+02	1.741E+02	1.727E+02	1.714E+02	1.701E+02	1.688E+02	1.675E+02	1.670E+02
		1.657E+02	1.645E+02	1.633E+02	1.621E+02	1.610E+02	1.599E+02	1.589E+02	1.578E+02	1.568E+02	1.558E+02	1.548E+02	1.538E+02								

		1.209E+02	1.201E+02	1.194E+02	1.186E+02	1.178E+02	1.171E+02	1.164E+02	1.157E+02	1.150E+02	1.143E+02	1.081E+02	1.029E+02	8.662E+01	7.742E+01	7.130E+01	6.181E+01	5.456E+01	4.326E+01	3.212E+01	2.191E+01
BUR 22500.	1.72	1.718E+01	1.476E+01	1.347E+01	1.214E+01	1.138E+01	1.005E+01	8.602E+00	5.431E+00	2.092E+00	7.231E-01										
		7.089E+03	3.659E+03	2.276E+03	1.608E+03	1.268E+03	1.074E+03	9.601E+02	8.868E+02	8.358E+02	8.008E+02	7.682E+02	7.438E+02	7.230E+02	7.049E+02	6.908E+02	6.733E+02	6.597E+02	6.470E+02	6.351E+02	6.263E+02
		6.139E+02	6.034E+02	5.934E+02	5.838E+02	5.745E+02	5.655E+02	5.568E+02	5.483E+02	5.401E+02	5.335E+02	5.267E+02	5.169E+02	5.094E+02	5.021E+02	4.950E+02	4.881E+02	4.813E+02	4.747E+02	4.682E+02	4.618E+02
		4.557E+02	4.498E+02	4.437E+02	4.378E+02	4.322E+02	4.266E+02	4.211E+02	4.158E+02	4.105E+02	4.068E+02	4.007E+02	3.957E+02	3.908E+02	3.861E+02	3.816E+02	3.771E+02	3.727E+02	3.684E+02	3.642E+02	3.601E+02
		3.560E+02	3.520E+02	3.481E+02	3.443E+02	3.406E+02	3.369E+02	3.333E+02	3.298E+02	3.264E+02	3.230E+02	3.197E+02	3.164E+02	3.132E+02	3.101E+02	3.071E+02	3.041E+02	3.011E+02	2.982E+02	2.954E+02	2.926E+02
		2.895E+02	2.872E+02	2.846E+02	2.821E+02	2.796E+02	2.771E+02	2.747E+02	2.723E+02	2.700E+02	2.677E+02	2.655E+02	2.633E+02	2.611E+02	2.590E+02	2.569E+02	2.549E+02	2.529E+02	2.509E+02	2.490E+02	2.483E+02
		2.459E+02	2.440E+02	2.422E+02	2.404E+02	2.387E+02	2.370E+02	2.354E+02	2.337E+02	2.321E+02	2.306E+02	2.290E+02	2.275E+02	2.261E+02	2.246E+02	2.232E+02	2.218E+02	2.204E+02	2.191E+02	2.177E+02	2.164E+02
		2.151E+02	2.139E+02	2.128E+02	2.114E+02	2.102E+02	2.090E+02	2.079E+02	2.067E+02	2.056E+02	2.045E+02	1.945E+02	1.859E+02	1.577E+02	1.400E+02	1.280E+02	1.091E+02	9.511E+01	7.370E+01	5.301E+01	3.420E+01
BUR 22500.	2.42	2.553E+01	2.119E+01	1.894E+01	1.671E+01	1.556E+01	1.354E+01	1.142E+01	6.881E+00	2.525E+00	8.879E-01										
		6.605E+03	3.398E+03	2.116E+03	1.501E+03	1.191E+03	1.016E+03	9.130E+02	8.466E+02	8.001E+02	7.670E+02	7.371E+02	7.145E+02	6.950E+02	6.778E+02	6.643E+02	6.486E+02	6.353E+02	6.230E+02	6.113E+02	6.018E+02
		5.897E+02	5.794E+02	5.696E+02	5.601E+02	5.510E+02	5.421E+02	5.334E+02	5.250E+02	5.168E+02	5.108E+02	5.014E+02	4.957E+02	4.862E+02	4.789E+02	4.719E+02	4.649E+02	4.582E+02	4.515E+02	4.451E+02	4.387E+02
		4.325E+02	4.264E+02	4.205E+02	4.147E+02	4.090E+02	4.034E+02	3.979E+02	3.926E+02	3.874E+02	3.835E+02	3.777E+02	3.727E+02	3.679E+02	3.632E+02	3.586E+02	3.541E+02	3.497E+02	3.454E+02	3.412E+02	3.370E+02
		3.330E+02	3.290E+02	3.251E+02	3.212E+02	3.175E+02	3.138E+02	3.102E+02	3.067E+02	3.032E+02	2.999E+02	2.965E+02	2.933E+02	2.901E+02	2.870E+02	2.839E+02	2.809E+02	2.780E+02	2.751E+02	2.722E+02	2.695E+02
		2.668E+02	2.641E+02	2.615E+02	2.589E+02	2.564E+02	2.540E+02	2.515E+02	2.492E+02	2.469E+02	2.446E+02	2.424E+02	2.402E+02	2.380E+02	2.359E+02	2.339E+02	2.319E+02	2.299E+02	2.279E+02	2.260E+02	2.242E+02
		2.225E+02	2.209E+02	2.191E+02	2.174E+02	2.157E+02	2.140E+02	2.124E+02	2.108E+02	2.092E+02	2.077E+02	2.062E+02	2.047E+02	2.032E+02	2.018E+02	2.004E+02	1.990E+02	1.977E+02	1.963E+02	1.950E+02	1.937E+02
		1.925E+02	1.913E+02	1.900E+02	1.888E+02	1.877E+02	1.865E+02	1.854E+02	1.843E+02	1.832E+02	1.821E+02	1.724E+02	1.641E+02	1.375E+02	1.217E+02	1.112E+02	9.495E+01	8.300E+01	6.466E+01	4.696E+01	3.079E+01
BUR 22500.	3.12	2.335E+01	1.961E+01	1.764E+01	1.566E+01	1.459E+01	1.275E+01	1.077E+01	6.599E+00	2.443E+00	8.733E-01										
		6.223E+03	3.180E+03	1.989E+03	1.419E+03	1.133E+03	9.734E+02	8.795E+02	8.185E+02	7.755E+02	7.442E+02	7.166E+02	6.947E+02	6.758E+02	6.591E+02	6.454E+02	6.302E+02	6.171E+02	6.047E+02	5.931E+02	5.831E+02
		5.711E+02	5.608E+02	5.509E+02	5.413E+02	5.320E+02	5.229E+02	5.142E+02	5.056E+02	4.972E+02	4.901E+02	4.815E+02	4.736E+02	4.660E+02	4.585E+02	4.514E+02	4.443E+02	4.374E+02	4.306E+02	4.240E+02	4.176E+02
		4.112E+02	4.051E+02	3.990E+02	3.931E+02	3.873E+02	3.816E+02	3.760E+02	3.706E+02	3.653E+02	3.611E+02	3.559E+02	3.504E+02	3.455E+02	3.407E+02	3.360E+02	3.315E+02	3.270E+02	3.226E+02	3.183E+02	3.141E+02
		3.100E+02	3.059E+02	3.019E+02	2.981E+02	2.943E+02	2.906E+02	2.869E+02	2.833E+02	2.798E+02	2.764E+02	2.731E+02	2.698E+02	2.666E+02	2.634E+02	2.603E+02	2.573E+02	2.543E+02	2.514E+02	2.485E+02	2.458E+02
		2.431E+02	2.404E+02	2.378E+02	2.352E+02	2.327E+02	2.302E+02	2.278E+02	2.255E+02	2.231E+02	2.209E+02	2.186E+02	2.165E+02	2.143E+02	2.122E+02	2.102E+02	2.082E+02	2.062E+02	2.043E+02	2.024E+02	2.005E+02
		1.971E+02	1.972E+02	1.954E+02	1.937E+02	1.920E+02	1.904E+02	1.888E+02	1.872E+02	1.856E+02	1.841E+02	1.826E+02	1.812E+02	1.797E+02	1.783E+02	1.770E+02	1.756E+02	1.743E+02	1.730E+02	1.717E+02	1.704E+02
		1.692E+02	1.680E+02	1.668E+02	1.656E+02	1.645E+02	1.634E+02	1.623E+02	1.612E+02	1.601E+02	1.591E+02	1.497E+02	1.418E+02	1.170E+02	1.031E+02	9.418E+01	8.062E+01	7.075E+01	5.554E+01	4.082E+01	2.738E+01
BUR 30000.	2.23	2.115E+01	1.798E+01	1.630E+01	1.457E+01	1.362E+01	1.195E+01	1.012E+01	6.234E+00	2.365E+00	8.640E-01										
		8.221E+03	4.433E+03	2.877E+03	2.109E+03	1.705E+03	1.467E+03	1.322E+03	1.224E+03	1.154E+03	1.105E+03	1.060E+03	1.024E+03	9.939E+02	9.671E+02	9.454E+02	9.206E+02	9.003E+02	8.814E+02	8.636E+02	8.492E+02
		8.309E+02	8.152E+02	8.008E+02	7.869E+02	7.721E+02	7.585E+02	7.454E+02	7.330E+02	7.207E+02	7.107E+02	6.977E+02	6.862E+02	6.750E+02	6.643E+02	6.538E+02	6.436E+02	6.337E+02	6.240E+02	6.145E+02	6.052E+02
		5.962E+02	5.873E+02	5.787E+02	5.703E+02	5.620E+02	5.540E+02	5.461E+02	5.384E+02	5.309E+02	5.253E+02	5.166E+02	5.094E+02	5.025E+02	4.958E+02	4.892E+02	4.828E+02	4.766E+02	4.704E+02	4.644E+02	4.585E+02
		4.528E+02	4.472E+02	4.416E+02	4.362E+02	4.310E+02	4.258E+02	4.207E+02	4.158E+02	4.109E+02	4.061E+02	4.015E+02	3.969E+02	3.925E+02	3.881E+02	3.838E+02	3.796E+02	3.755E+02	3.715E+02	3.675E+02	3.636E+02
		3.599E+02	3.561E+02	3.525E+02	3.489E+02	3.455E+02	3.420E+02	3.387E+02	3.354E+02	3.322E+02	3.290E+02	3.259E+02	3.229E+02	3.199E+02	3.170E+02	3.141E+02	3.113E+02	3.086E+02	3.059E+02	3.032E+02	3.021E+02
		2.989E+02	2.962E+02	2.937E+02	2.913E+02	2.889E+02	2.866E+02	2.844E+02	2.821E+02	2.800E+02	2.778E+02	2.757E+02	2.737E+02	2.717E+02	2.697E+02	2.678E+02	2.658E+02	2.639E+02	2.621E+02	2.603E+02	2.585E+02
		2.567E+02	2.550E+02	2.533E+02	2.517E+02	2.501E+02	2.485E+02	2.469E+02	2.453E+02	2.438E+02	2.423E+02	2.408E+02	2.393E+02	2.378E+02	2.363E+02	2.348E+02	2.333E+02	2.318E+02	2.303E+02	2.288E+02	2.273E+02
		2.868E+01	2.426E+01	2.177E+01	1.904E+01	1.790E+01	1.550E+01	1.259E+01	7.674E+00	2.785E+00	1.039E+00										
BUR 30000.	2.93	7.694E+03	4.129E+03	2.681E+03	1.969E+03	1.598E+03	1.381E+03	1.248E+03	1.159E+03	1.095E+03	1.050E+03	1.007E+03	9.746E+02	9.466E+02	9.219E+02	9.004E+02	8.789E+02	8.599E+02	8.421E+02	8.254E+02	8.121E+02
		7.945E+02	7.796E+02	7.654E+02	7.518E+02	7.386E+02	7.258E+02	7.133E+02	7.012E+02	6.895E+02	6.802E+02	6.680E+02	6.599E+02	6.462E+02	6.358E+02	6.257E+02	6.159E+02	6.063E+02	5.968E+02	5.877E+02	5.787E+02
		5.699E+02	5.613E+02	5.529E+02	5.447E+02	5.367E+02	5.288E+02	5.212E+02	5.137E+02	5.063E+02	5.000E+02	4.923E+02	4.852E+02	4.785E+02	4.719E+02	4.655E+02	4.591E+02	4.531E+02	4.471E+02	4.412E+02	4.354E+02
		4.293E+02	4.242E+02	4.188E+02	4.135E+02	4.083E+02	4.032E+02	3.983E+02	3.934E+02	3.886E+02	3.839E+02	3.793E+02	3.749E+02	3.705E+02	3.661E+02	3.619E+02	3.578E+02	3.537E+02	3.498E+02	3.459E+02	3.421E+02
		3.383E+02	3.347E+02	3.311E+02	3.276E+02	3.241E+02	3.206E+02	3.175E+02	3.142E+02	3.111E+02	3.079E+02	3.049E+02	3.019E+02	2.990E+02	2.961E+02	2.933E+02	2.905E+02	2.878E+02	2.852E+02	2.826E+02	2.812E+02
		2.783E+02	2.757E+02	2.732E+02	2.708E+02	2.685E+02	2.662E+02	2.640E+02	2.618E+02	2.597E+02	2.576E+02	2.555E+02	2.535E+02	2.515E+02	2.495E+02	2.476E+02	2.457E+02	2.439E+02	2.421E+02	2.403E+02	2.386E+02
		2.369E+02	2.352E+02	2.335E+02	2.319E+02	2.303E+02	2.288E+02	2.272E+02	2.257E+02	2.242E+02	2.228E+02	2.205E+02	1.983E+02	1.624E+02	1.416E+02	1.282E+02	1.082E+02	9.414E+01	7.311E+01	5.331E+01	3.527E+01
		2.693E+01	2.269E+01	2.044E+01	1.813E+01	1.688E+01	1.466E+01	1.231E+01	7.335E+00	2.700E+00	1.019E+00										
BUR 30000.	3.63	7.245E+03	3.875E+03	2.521E+03	1.899E+03	1.516E+03	1.317E+03	1.195E+03	1.113E+03	1.054E+03	1.011E+03	9.718E+02	9.412E+02	9.146E+02	8.910E+02	8.719E+02	8.496E+02	8.313E+02	8.140E+02	7.977E+02	7.844E+02
		7.675E+02	7.530E+02	7.391E+02	7.257E+02	7.127E+02	7.001E+02	6.878E+02	6.759E+02	6.642E+02	6.										

		9.302E+02	9.154E+02	9.010E+02	8.870E+02	8.732E+02	8.598E+02	8.467E+02	8.340E+02	8.215E+02	8.113E+02	7.971E+02	7.852E+02	7.738E+02	7.627E+02	7.519E+02	7.413E+02	7.310E+02	7.209E+02	7.111E+02	7.014E+02
		6.920E+02	6.828E+02	6.737E+02	6.646E+02	6.563E+02	6.478E+02	6.395E+02	6.315E+02	6.235E+02	6.158E+02	6.082E+02	6.008E+02	5.935E+02	5.864E+02	5.794E+02	5.725E+02	5.659E+02	5.594E+02	5.530E+02	5.467E+02
		5.406E+02	5.345E+02	5.284E+02	5.223E+02	5.172E+02	5.117E+02	5.062E+02	5.009E+02	4.957E+02	4.906E+02	4.856E+02	4.807E+02	4.759E+02	4.712E+02	4.665E+02	4.620E+02	4.576E+02	4.532E+02	4.489E+02	4.446E+02
		4.418E+02	4.375E+02	4.334E+02	4.295E+02	4.257E+02	4.219E+02	4.183E+02	4.147E+02	4.112E+02	4.077E+02	4.043E+02	4.010E+02	3.977E+02	3.945E+02	3.913E+02	3.882E+02	3.852E+02	3.822E+02	3.793E+02	3.764E+02
		3.736E+02	3.708E+02	3.680E+02	3.654E+02	3.627E+02	3.601E+02	3.576E+02	3.551E+02	3.526E+02	3.502E+02	3.478E+02	3.454E+02	3.430E+02	3.406E+02	3.382E+02	3.358E+02	3.334E+02	3.310E+02	3.286E+02	3.262E+02
		3.238E+01	3.252E+01	2.915E+01	2.584E+01	2.405E+01	2.074E+01	1.733E+01	1.013E+01	3.699E+00	1.495E+00										
BWR 40000.	4.14	1.018E+04	5.827E+03	3.981E+03	3.037E+03	2.526E+03	2.208E+03	2.007E+03	1.866E+03	1.763E+03	1.687E+03	1.618E+03	1.563E+03	1.516E+03	1.475E+03	1.442E+03	1.401E+03	1.370E+03	1.340E+03	1.312E+03	1.291E+03
		1.262E+03	1.238E+03	1.214E+03	1.191E+03	1.169E+03	1.148E+03	1.127E+03	1.107E+03	1.088E+03	1.071E+03	1.051E+03	1.033E+03	1.015E+03	9.981E+02	9.815E+02	9.652E+02	9.494E+02	9.340E+02	9.189E+02	9.042E+02
		8.898E+02	8.758E+02	8.621E+02	8.487E+02	8.357E+02	8.229E+02	8.104E+02	7.982E+02	7.863E+02	7.770E+02	7.636E+02	7.522E+02	7.412E+02	7.305E+02	7.202E+02	7.101E+02	6.904E+02	6.809E+02	6.716E+02	6.625E+02
		6.626E+02	6.537E+02	6.449E+02	6.364E+02	6.281E+02	6.199E+02	6.119E+02	6.041E+02	5.964E+02	5.889E+02	5.815E+02	5.743E+02	5.673E+02	5.604E+02	5.536E+02	5.470E+02	5.405E+02	5.342E+02	5.279E+02	5.218E+02
		5.159E+02	5.100E+02	5.043E+02	4.987E+02	4.932E+02	4.878E+02	4.825E+02	4.773E+02	4.722E+02	4.672E+02	4.623E+02	4.576E+02	4.529E+02	4.483E+02	4.438E+02	4.393E+02	4.350E+02	4.308E+02	4.266E+02	4.244E+02
		4.196E+02	4.154E+02	4.114E+02	4.076E+02	4.039E+02	4.002E+02	3.967E+02	3.932E+02	3.897E+02	3.863E+02	3.830E+02	3.798E+02	3.766E+02	3.734E+02	3.704E+02	3.673E+02	3.644E+02	3.615E+02	3.586E+02	3.558E+02
		3.530E+02	3.503E+02	3.476E+02	3.450E+02	3.424E+02	3.399E+02	3.374E+02	3.350E+02	3.326E+02	3.302E+02	3.087E+02	2.904E+02	2.311E+02	1.963E+02	1.746E+02	1.434E+02	1.233E+02	9.519E+01	6.963E+01	4.666E+01
BWR 50000.	3.04	3.605E+01	3.057E+01	2.763E+01	2.454E+01	2.287E+01	1.975E+01	1.654E+01	9.742E+00	3.603E+00	1.469E+00										
		1.173E+04	6.986E+03	4.946E+03	3.875E+03	3.280E+03	2.899E+03	2.647E+03	2.467E+03	2.331E+03	2.227E+03	2.136E+03	2.061E+03	1.996E+03	1.937E+03	1.887E+03	1.834E+03	1.789E+03	1.747E+03	1.708E+03	1.674E+03
		1.635E+03	1.600E+03	1.566E+03	1.534E+03	1.503E+03	1.473E+03	1.444E+03	1.416E+03	1.389E+03	1.365E+03	1.338E+03	1.313E+03	1.288E+03	1.265E+03	1.242E+03	1.220E+03	1.198E+03	1.177E+03	1.157E+03	1.137E+03
		1.118E+03	1.099E+03	1.080E+03	1.062E+03	1.045E+03	1.028E+03	1.011E+03	9.953E+02	9.795E+02	9.688E+02	9.501E+02	9.350E+02	9.207E+02	9.068E+02	8.932E+02	8.800E+02	8.671E+02	8.546E+02	8.423E+02	8.303E+02
		8.185E+02	8.071E+02	7.959E+02	7.850E+02	7.743E+02	7.639E+02	7.537E+02	7.437E+02	7.340E+02	7.245E+02	7.152E+02	7.061E+02	6.972E+02	6.885E+02	6.800E+02	6.717E+02	6.635E+02	6.556E+02	6.478E+02	6.402E+02
		6.327E+02	6.254E+02	6.183E+02	6.113E+02	6.045E+02	5.978E+02	5.912E+02	5.848E+02	5.785E+02	5.723E+02	5.663E+02	5.604E+02	5.546E+02	5.490E+02	5.434E+02	5.380E+02	5.326E+02	5.274E+02	5.223E+02	5.197E+02
		5.136E+02	5.084E+02	5.035E+02	4.987E+02	4.943E+02	4.899E+02	4.855E+02	4.812E+02	4.770E+02	4.729E+02	4.689E+02	4.649E+02	4.610E+02	4.572E+02	4.534E+02	4.498E+02	4.461E+02	4.426E+02	4.391E+02	4.357E+02
		4.323E+02	4.290E+02	4.258E+02	4.226E+02	4.195E+02	4.164E+02	4.134E+02	4.104E+02	4.075E+02	4.046E+02	3.784E+02	3.561E+02	2.890E+02	2.387E+02	2.108E+02	1.715E+02	1.467E+02	1.129E+02	8.301E+01	5.620E+01
BWR 50000.	3.74	4.380E+01	3.730E+01	3.376E+01	2.994E+01	2.788E+01	2.389E+01	1.984E+01	1.134E+01	4.048E+00	1.675E+00										
		1.113E+04	6.581E+03	4.638E+03	3.623E+03	3.060E+03	2.702E+03	2.467E+03	2.299E+03	2.174E+03	2.080E+03	1.997E+03	1.928E+03	1.868E+03	1.815E+03	1.769E+03	1.722E+03	1.681E+03	1.643E+03	1.607E+03	1.577E+03
		1.542E+03	1.510E+03	1.480E+03	1.451E+03	1.423E+03	1.396E+03	1.369E+03	1.344E+03	1.319E+03	1.297E+03	1.272E+03	1.249E+03	1.227E+03	1.205E+03	1.184E+03	1.164E+03	1.144E+03	1.125E+03	1.106E+03	1.088E+03
		1.070E+03	1.052E+03	1.035E+03	1.018E+03	1.002E+03	9.864E+02	9.708E+02	9.558E+02	9.411E+02	9.295E+02	9.127E+02	8.986E+02	8.852E+02	8.721E+02	8.594E+02	8.470E+02	8.349E+02	8.230E+02	8.114E+02	8.001E+02
		7.891E+02	7.782E+02	7.676E+02	7.573E+02	7.472E+02	7.373E+02	7.276E+02	7.181E+02	7.089E+02	6.998E+02	6.909E+02	6.822E+02	6.737E+02	6.654E+02	6.573E+02	6.498E+02	6.415E+02	6.339E+02	6.264E+02	6.191E+02
		6.119E+02	6.049E+02	5.980E+02	5.913E+02	5.847E+02	5.783E+02	5.719E+02	5.657E+02	5.597E+02	5.537E+02	5.479E+02	5.422E+02	5.366E+02	5.311E+02	5.257E+02	5.204E+02	5.152E+02	5.102E+02	5.052E+02	5.028E+02
		4.969E+02	4.919E+02	4.871E+02	4.826E+02	4.781E+02	4.738E+02	4.695E+02	4.654E+02	4.613E+02	4.572E+02	4.533E+02	4.494E+02	4.456E+02	4.419E+02	4.382E+02	4.346E+02	4.310E+02	4.276E+02	4.241E+02	4.208E+02
		4.175E+02	4.143E+02	4.111E+02	4.079E+02	4.049E+02	4.018E+02	3.988E+02	3.960E+02	3.931E+02	3.903E+02	3.645E+02	3.426E+02	2.707E+02	2.278E+02	2.008E+02	1.629E+02	1.392E+02	1.071E+02	7.874E+01	5.355E+01
BWR 50000.	4.44	4.159E+02	3.545E+02	3.210E+02	2.851E+02	2.653E+02	2.280E+02	1.896E+02	1.095E+02	3.958E+00	1.660E+00										
		1.055E+04	6.205E+03	4.362E+03	3.404E+03	2.874E+03	2.537E+03	2.317E+03	2.162E+03	2.045E+03	1.959E+03	1.880E+03	1.816E+03	1.761E+03	1.713E+03	1.674E+03	1.627E+03	1.590E+03	1.555E+03	1.522E+03	1.496E+03
		1.463E+03	1.433E+03	1.405E+03	1.378E+03	1.352E+03	1.327E+03	1.303E+03	1.279E+03	1.256E+03	1.237E+03	1.213E+03	1.191E+03	1.170E+03	1.150E+03	1.131E+03	1.111E+03	1.093E+03	1.075E+03	1.057E+03	1.040E+03
		1.025E+03	1.006E+03	9.903E+02	9.746E+02	9.593E+02	9.443E+02	9.297E+02	9.154E+02	9.014E+02	8.905E+02	8.750E+02	8.616E+02	8.488E+02	8.363E+02	8.242E+02	8.124E+02	8.008E+02	7.895E+02	7.784E+02	7.676E+02
		7.569E+02	7.466E+02	7.364E+02	7.265E+02	7.168E+02	7.073E+02	6.980E+02	6.888E+02	6.799E+02	6.712E+02	6.626E+02	6.543E+02	6.461E+02	6.381E+02	6.302E+02	6.225E+02	6.150E+02	6.076E+02	6.004E+02	5.933E+02
		5.863E+02	5.795E+02	5.729E+02	5.664E+02	5.600E+02	5.537E+02	5.476E+02	5.416E+02	5.357E+02	5.299E+02	5.242E+02	5.187E+02	5.132E+02	5.079E+02	5.026E+02	4.975E+02	4.925E+02	4.876E+02	4.827E+02	4.802E+02
		4.756E+02	4.696E+02	4.650E+02	4.605E+02	4.562E+02	4.520E+02	4.478E+02	4.437E+02	4.398E+02	4.358E+02	4.320E+02	4.282E+02	4.245E+02	4.208E+02	4.173E+02	4.137E+02	4.103E+02	4.069E+02	4.036E+02	4.003E+02
		3.971E+02	3.939E+02	3.908E+02	3.878E+02	3.848E+02	3.818E+02	3.789E+02	3.761E+02	3.733E+02	3.705E+02	3.450E+02	3.241E+02	2.546E+02	2.136E+02	1.882E+02	1.528E+02	1.306E+02	1.006E+02	7.408E+01	5.031E+01
PWR 10000.	.99	3.984E+01	3.360E+01	3.048E+01	2.711E+01	2.523E+01	2.173E+01	1.811E+01	1.052E+01	3.858E+00	1.632E+00										
		5.071E+02	2.334E+03	1.321E+03	8.481E+02	6.203E+02	5.021E+02	4.380E+02	4.001E+02	3.758E+02	3.593E+02	3.458E+02	3.356E+02	3.272E+02	3.198E+02	3.140E+02	3.075E+02	3.021E+02	2.972E+02	2.925E+02	2.886E+02
		2.898E+02	2.798E+02	2.760E+02	2.725E+02	2.688E+02	2.654E+02	2.621E+02	2.588E+02	2.557E+02	2.530E+02	2.498E+02	2.468E+02	2.439E+02	2.411E+02	2.384E+02	2.357E+02	2.331E+02	2.305E+02	2.280E+02	2.255E+02
		2.231E+02	2.207E+02	2.189E+02	2.160E+02	2.138E+02	2.116E+02	2.094E+02	2.072E+02	2.051E+02	2.035E+02	2.010E+02	1.991E+02	1.971E+02	1.952E+02	1.934E+02	1.915E+02	1.897E+02	1.880E+02	1.862E+02	1.845E+02
		1.829E+02	1.812E+02	1.796E+02	1.780E+02	1.764E+02	1.749E+02	1.734E+02	1.719E+02	1.705E+02	1.690E+02	1.676E+02	1.663E+02	1.649E+02	1.636E+02	1.623E+02	1.610E+02	1.597E+02	1.585E+02	1.573E+02	1.561E+02
		1.549E+02	1.538E+02	1.528E+02	1.515E+02	1.504E+02	1.494E+02	1.483E+02	1.473E+02	1.463E+02	1.453E+02	1.443E+02	1.434E+02	1.424E+02	1.415E+02	1.406E+02	1.397E+02	1.388E+02	1.380E+02	1.371E+02	1.368E+02
		1.357E+02	1.346E+02	1.341E+02	1.333E+0																

		6.916E+01	6.865E+01	6.815E+01	6.766E+01	6.718E+01	6.671E+01	6.624E+01	6.579E+01	6.535E+01	6.491E+01	6.100E+01	5.776E+01	4.802E+01	4.299E+01	3.990E+01	3.521E+01	3.162E+01	2.594E+01	2.030E+01	1.505E+01
PWR 20000.	1.74	1.259E+01	1.052E+01	9.680E+00	9.163E+00	8.194E+00	7.111E+00	4.664E+00	1.899E+00	6.278E-01											
		7.430E+03	3.679E+03	2.197E+03	1.492E+03	1.140E+03	9.482E+02	8.398E+02	7.704E+02	6.915E+02	6.633E+02	6.418E+02	6.237E+02	6.078E+02	5.953E+02	5.810E+02	5.691E+02	5.581E+02	5.477E+02	5.393E+02	
		5.285E+02	5.195E+02	5.109E+02	5.027E+02	4.948E+02	4.871E+02	4.792E+02	4.723E+02	4.652E+02	4.589E+02	4.524E+02	4.458E+02	4.394E+02	4.331E+02	4.271E+02	4.211E+02	4.153E+02	4.097E+02	4.041E+02	
		3.934E+02	3.882E+02	3.831E+02	3.781E+02	3.733E+02	3.685E+02	3.638E+02	3.592E+02	3.547E+02	3.512E+02	3.460E+02	3.418E+02	3.377E+02	3.337E+02	3.297E+02	3.259E+02	3.221E+02	3.184E+02	3.148E+02	
		3.077E+02	3.043E+02	3.009E+02	2.978E+02	2.944E+02	2.912E+02	2.881E+02	2.851E+02	2.821E+02	2.792E+02	2.763E+02	2.735E+02	2.708E+02	2.681E+02	2.654E+02	2.628E+02	2.603E+02	2.578E+02	2.553E+02	
		2.505E+02	2.489E+02	2.460E+02	2.438E+02	2.416E+02	2.395E+02	2.374E+02	2.353E+02	2.333E+02	2.314E+02	2.294E+02	2.275E+02	2.257E+02	2.238E+02	2.220E+02	2.203E+02	2.186E+02	2.169E+02	2.152E+02	
		2.125E+02	2.109E+02	2.092E+02	2.078E+02	2.063E+02	2.048E+02	2.034E+02	2.020E+02	2.006E+02	1.998E+02	1.980E+02	1.967E+02	1.954E+02	1.942E+02	1.929E+02	1.917E+02	1.905E+02	1.894E+02	1.882E+02	
		1.860E+02	1.849E+02	1.838E+02	1.828E+02	1.818E+02	1.808E+02	1.798E+02	1.788E+02	1.778E+02	1.769E+02	1.683E+02	1.610E+02	1.370E+02	1.225E+02	1.125E+02	9.680E+01	8.488E+01	6.640E+01	4.838E+01	
PWR 20000.	2.44	2.429E+01	2.045E+01	1.843E+01	1.640E+01	1.529E+01	1.338E+01	1.132E+01	6.909E+00	2.545E+00	8.504E-01										
		6.974E+03	3.421E+03	2.045E+03	1.396E+03	1.077E+03	9.033E+02	8.047E+02	7.428E+02	7.004E+02	6.707E+02	6.446E+02	6.242E+02	6.067E+02	5.913E+02	5.786E+02	5.649E+02	5.530E+02	5.420E+02	5.315E+02	
		5.120E+02	5.029E+02	4.941E+02	4.857E+02	4.775E+02	4.696E+02	4.619E+02	4.544E+02	4.471E+02	4.408E+02	4.333E+02	4.265E+02	4.199E+02	4.135E+02	4.072E+02	4.011E+02	3.951E+02	3.892E+02	3.835E+02	
		3.724E+02	3.670E+02	3.618E+02	3.566E+02	3.516E+02	3.467E+02	3.419E+02	3.371E+02	3.325E+02	3.288E+02	3.239E+02	3.196E+02	3.153E+02	3.112E+02	3.071E+02	3.031E+02	2.992E+02	2.954E+02	2.917E+02	
		2.844E+02	2.809E+02	2.774E+02	2.741E+02	2.708E+02	2.675E+02	2.643E+02	2.612E+02	2.582E+02	2.552E+02	2.523E+02	2.494E+02	2.466E+02	2.438E+02	2.411E+02	2.385E+02	2.359E+02	2.334E+02	2.309E+02	
		2.261E+02	2.237E+02	2.214E+02	2.192E+02	2.170E+02	2.148E+02	2.127E+02	2.106E+02	2.086E+02	2.066E+02	2.047E+02	2.028E+02	2.009E+02	1.991E+02	1.973E+02	1.955E+02	1.938E+02	1.921E+02	1.904E+02	
		1.875E+02	1.859E+02	1.843E+02	1.828E+02	1.814E+02	1.799E+02	1.785E+02	1.771E+02	1.757E+02	1.744E+02	1.731E+02	1.718E+02	1.705E+02	1.692E+02	1.681E+02	1.669E+02	1.657E+02	1.646E+02	1.635E+02	
		1.613E+02	1.602E+02	1.592E+02	1.581E+02	1.571E+02	1.561E+02	1.552E+02	1.542E+02	1.533E+02	1.524E+02	1.440E+02	1.370E+02	1.148E+02	1.021E+02	9.376E+01	8.086E+01	7.117E+01	5.615E+01	4.148E+01	
PWR 20000.	3.14	2.180E+01	1.861E+01	1.692E+01	1.516E+01	1.419E+01	1.245E+01	1.058E+01	6.536E+00	2.452E+00	8.369E-01										
		6.634E+03	3.225E+03	1.929E+03	1.324E+03	1.030E+03	8.700E+02	7.798E+02	7.229E+02	6.836E+02	6.554E+02	6.308E+02	6.111E+02	5.940E+02	5.788E+02	5.658E+02	5.522E+02	5.403E+02	5.290E+02	5.184E+02	
		4.982E+02	4.889E+02	4.798E+02	4.711E+02	4.627E+02	4.544E+02	4.465E+02	4.387E+02	4.311E+02	4.243E+02	4.167E+02	4.097E+02	4.028E+02	3.961E+02	3.896E+02	3.833E+02	3.770E+02	3.709E+02	3.650E+02	
		3.535E+02	3.479E+02	3.425E+02	3.372E+02	3.320E+02	3.269E+02	3.219E+02	3.170E+02	3.122E+02	3.082E+02	3.031E+02	2.986E+02	2.943E+02	2.900E+02	2.858E+02	2.817E+02	2.777E+02	2.738E+02	2.699E+02	
		2.625E+02	2.589E+02	2.554E+02	2.519E+02	2.485E+02	2.452E+02	2.420E+02	2.388E+02	2.357E+02	2.326E+02	2.297E+02	2.267E+02	2.238E+02	2.211E+02	2.184E+02	2.157E+02	2.130E+02	2.105E+02	2.079E+02	
		2.031E+02	2.007E+02	1.984E+02	1.961E+02	1.939E+02	1.917E+02	1.895E+02	1.875E+02	1.855E+02	1.835E+02	1.815E+02	1.796E+02	1.777E+02	1.759E+02	1.740E+02	1.722E+02	1.705E+02	1.689E+02	1.672E+02	
		1.642E+02	1.626E+02	1.611E+02	1.596E+02	1.581E+02	1.567E+02	1.553E+02	1.539E+02	1.525E+02	1.512E+02	1.499E+02	1.486E+02	1.474E+02	1.462E+02	1.450E+02	1.438E+02	1.427E+02	1.415E+02	1.404E+02	
		1.383E+02	1.372E+02	1.362E+02	1.352E+02	1.342E+02	1.333E+02	1.323E+02	1.314E+02	1.305E+02	1.296E+02	1.216E+02	1.149E+02	9.428E+01	8.333E+01	7.645E+01	6.611E+01	5.849E+01	4.662E+01	3.502E+01	
PWR 30000.	2.41	1.938E+01	1.680E+01	1.541E+01	1.392E+01	1.306E+01	1.150E+01	9.817E+00	6.148E+00	2.358E+00	8.302E-01										
		9.270E+03	4.848E+03	3.044E+03	2.164E+03	1.709E+03	1.449E+03	1.294E+03	1.192E+03	1.120E+03	1.068E+03	1.022E+03	9.857E+02	9.566E+02	9.302E+02	9.094E+02	8.847E+02	8.648E+02	8.463E+02	8.289E+02	
		7.974E+02	7.822E+02	7.677E+02	7.538E+02	7.403E+02	7.273E+02	7.146E+02	7.024E+02	6.905E+02	6.804E+02	6.681E+02	6.570E+02	6.462E+02	6.358E+02	6.257E+02	6.158E+02	6.062E+02	5.968E+02	5.876E+02	
		5.699E+02	5.613E+02	5.530E+02	5.448E+02	5.368E+02	5.290E+02	5.214E+02	5.139E+02	5.066E+02	5.008E+02	4.925E+02	4.855E+02	4.789E+02	4.724E+02	4.660E+02	4.598E+02	4.537E+02	4.478E+02	4.419E+02	
		4.306E+02	4.252E+02	4.198E+02	4.146E+02	4.094E+02	4.044E+02	3.995E+02	3.946E+02	3.899E+02	3.853E+02	3.807E+02	3.763E+02	3.720E+02	3.677E+02	3.635E+02	3.594E+02	3.554E+02	3.515E+02	3.477E+02	
		3.402E+02	3.366E+02	3.331E+02	3.296E+02	3.262E+02	3.229E+02	3.196E+02	3.164E+02	3.133E+02	3.102E+02	3.072E+02	3.043E+02	3.014E+02	2.986E+02	2.958E+02	2.931E+02	2.904E+02	2.878E+02	2.852E+02	
		2.808E+02	2.783E+02	2.759E+02	2.735E+02	2.712E+02	2.690E+02	2.668E+02	2.647E+02	2.626E+02	2.605E+02	2.585E+02	2.565E+02	2.545E+02	2.526E+02	2.507E+02	2.489E+02	2.471E+02	2.453E+02	2.435E+02	
		2.401E+02	2.385E+02	2.369E+02	2.353E+02	2.332E+02	2.306E+02	2.292E+02	2.277E+02	2.263E+02	2.249E+02	2.233E+02	2.219E+02	2.205E+02	2.191E+02	2.177E+02	2.163E+02	2.149E+02	2.135E+02	2.121E+02	
PWR 30000.	3.11	2.917E+01	2.472E+01	2.235E+01	1.987E+01	1.851E+01	1.606E+01	1.347E+01	7.995E+00	2.893E+00	1.036E+00										
		8.728E+03	4.536E+03	2.850E+03	2.033E+03	1.615E+03	1.377E+03	1.235E+03	1.142E+03	1.076E+03	1.028E+03	9.899E+02	9.528E+02	9.244E+02	8.994E+02	8.789E+02	8.563E+02	8.371E+02	8.192E+02	8.023E+02	
		7.709E+02	7.562E+02	7.420E+02	7.284E+02	7.152E+02	7.025E+02	6.901E+02	6.780E+02	6.663E+02	6.555E+02	6.442E+02	6.332E+02	6.227E+02	6.124E+02	6.024E+02	5.925E+02	5.830E+02	5.737E+02	5.646E+02	
		5.470E+02	5.385E+02	5.302E+02	5.221E+02	5.142E+02	5.064E+02	4.988E+02	4.914E+02	4.841E+02	4.768E+02	4.696E+02	4.625E+02	4.554E+02	4.484E+02	4.414E+02	4.344E+02	4.274E+02	4.204E+02	4.134E+02	
		4.090E+02	4.035E+02	3.982E+02	3.929E+02	3.878E+02	3.827E+02	3.778E+02	3.730E+02	3.683E+02	3.636E+02	3.591E+02	3.547E+02	3.503E+02	3.461E+02	3.419E+02	3.378E+02	3.338E+02	3.299E+02	3.261E+02	
		3.187E+02	3.151E+02	3.115E+02	3.081E+02	3.047E+02	3.014E+02	2.981E+02	2.949E+02	2.918E+02	2.887E+02	2.857E+02	2.828E+02	2.799E+02	2.771E+02	2.744E+02	2.716E+02	2.690E+02	2.664E+02	2.638E+02	
		2.595E+02	2.570E+02	2.546E+02	2.522E+02	2.500E+02	2.478E+02	2.456E+02	2.435E+02	2.414E+02	2.394E+02	2.373E+02	2.354E+02	2.334E+02	2.315E+02	2.297E+02	2.279E+02	2.261E+02	2.243E+02	2.226E+02	
		2.195E+02	2.176E+02	2.160E+02	2.145E+02	2.129E+02	2.114E+02	2.099E+02	2.085E+02	2.070E+02	2.056E+02	1.929E+02	1.822E+02	1.486E+02	1.298E+02	1.179E+02	1.002E+02	8.775E+01	6.888E+01	5.095E+01	
PWR 30000.	3.81	2.692E+01	2.299E+01	2.088E+01	1.865E+01	1.739E+01	1.514E+01	1.272E+01	7.631E+00	2.805E+00	1.018E+00										
		8.281E+03																			

Aug 08 18:16 1994 File Name: heatcat.dat BWAM0000-01/17-0200-0001 REV 00 ATTACHMENT 11 - Page 5

4.257E+02 4.220E+02 4.183E+02 4.148E+02 4.112E+02 4.078E+02 4.044E+02 4.010E+02 3.977E+02 3.945E+02 3.652E+02 3.408E+02 2.605E+02 2.157E+02 1.884E+02 1.524E+02 1.305E+02 1.019E+02 7.720E+01 5.509E+01
4.473E+01 3.908E+01 3.589E+01 3.220E+01 2.999E+01 2.575E+01 2.135E+01 1.220E+01 4.378E+00 1.831E+00

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/COM, **
/COM, ** Executable File Name: PHIA00B.EXE **
/COM, ** Output File Name: bwr1049.dat **
/COM, ** Execution Date: 03/07/95 **
/COM, ** Start Age (years): 10.0 **
/COM, ** Decay Period (years): 10000 **
/COM, ** Enrichment (percent): 3.74 **
/COM, ** Burnup (MWd/MTU): 49000 **
/COM, ** Assembly Type: BWR **
/COM, ** SNF U Mass (MTU/assy): 0.200 **
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/COM, ** ASSY(#,1) is the SNF assembly heat in Watts. **
/COM, ** ASSY(#,0) is the time post emplacement in years. **
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ASSY( 7,1)= 408.38, 408.20, 408.03, 407.86, 407.68, 406.82,
ASSY(13,1)= 405.97, 405.12, 404.28, 403.44, 402.61, 401.79,
ASSY(19,1)= 400.97, 400.15, 399.34, 398.54, 397.74, 396.95,
ASSY(25,1)= 396.16, 395.38, 394.60, 393.83, 393.06, 386.07,
ASSY(31,1)= 379.49, 373.43, 367.70, 362.36, 357.29, 352.69,
ASSY(37,1)= 348.30, 343.56, 339.03, 334.93, 331.00, 327.18,
ASSY(43,1)= 323.52, 319.92, 316.46, 313.46, 310.56, 280.32,
ASSY(49,1)= 255.61, 233.40, 214.52, 197.62, 183.32, 169.57,
ASSY(55,1)= 157.90, 147.48, 138.15, 129.78, 122.25, 115.48,
ASSY(61,1)= 109.37, 103.85, 99.33, 94.47, 90.35, 64.29,
ASSY(67,1)= 51.61, 43.92, 38.89, 34.91, 31.79, 29.32,
ASSY(73,1)= 27.23, 25.32, 23.69, 22.28, 21.02, 19.82,
ASSY(79,1)= 18.76, 17.81, 16.96, 16.20, 15.49, 10.52,
ASSY(85,1)= 8.21, 7.00, 6.34, 5.95, 5.64, 5.43,
ASSY(91,1)= 5.25, 5.03, 4.83, 4.66, 4.51, 4.35,
ASSY(97,1)= 4.21, 4.08, 3.96, 3.85, 3.75,
ASSY( 1,0)= 0.000001, 0.01, 0.02, 0.03, 0.04, 0.05,
ASSY( 7,0)= 0.06, 0.07, 0.08, 0.09, 0.10, 0.15,
ASSY(13,0)= 0.20, 0.25, 0.30, 0.35, 0.40, 0.45,
ASSY(19,0)= 0.50, 0.55, 0.60, 0.65, 0.70, 0.75,
ASSY(25,0)= 0.80, 0.85, 0.90, 0.95, 1.00, 1.50,
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ASSY(49,0)= 20.00, 25.00, 30.00, 35.00, 40.00, 45.00,
ASSY(55,0)= 50.00, 55.00, 60.00, 65.00, 70.00, 75.00,
ASSY(61,0)= 80.00, 85.00, 90.00, 95.00, 100.00, 150.00,
ASSY(67,0)= 200.00, 250.00, 300.00, 350.00, 400.00, 450.00,
ASSY(73,0)= 500.00, 550.00, 600.00, 650.00, 700.00, 750.00,
ASSY(79,0)= 800.00, 850.00, 900.00, 950.00, 1000.00, 1500.00,
ASSY(85,0)= 2000.00, 2500.00, 3000.00, 3500.00, 4000.00, 4500.00,
ASSY(91,0)= 5000.00, 5500.00, 6000.00, 6500.00, 7000.00, 7500.00,
ASSY(97,0)= 8000.00, 8500.00, 9000.00, 9500.00, 10000.00,
ASSY( 0,1)=1.0
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/EOF

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/COM, **      Compiled by R. Bahney III on 1-30-95          **
/COM, *****
/COM,
/COM, NUMBER MATERIAL DESCRIPTION
/COM, 1 Stainless Steel 316 Basket Structural Support
/COM, 2 Incaloy 825 Inner Container (resistant)
/COM, 3 A516 Mild Steel Outer Container (allowance)
/COM, 4 UO2 Pellet SNF Uranium Oxide Pellet
/COM, 5 Zircaloy 4 SNF Cladding
/COM, 6 Oxidation Layer Stably Oxidized Zircaloy Surface
/COM, 7 Helium Canister Fill Gas
/COM, 8 Air Alternate Fill Gas
/COM, 9 Nitrogen Alternate Fill Gas
/COM, 10 Argon Alternate Fill Gas
/COM, 11 Aluminum 6063 Thermal Conductor
/COM, 12 Copper Alternate Thermal Conductor
/COM, 13 Aluminum-Boron Aluminum Boron Criticality Matl
/COM,
/COM, *****
/COM, **      Density: DENS (kg/m^3) **
/COM, **      Emissivity EMIS **
/COM, **      Conductivity: KXX (W/m/K) **
/COM, **      Specific Heat: C (J/kg/K) **
/COM, *****
/COM, Define densities for all materials except gases
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MPDATA,DENS, 1, 1, .80000E+04,
MPDATA,DENS, 2, 1, .81379E+04,
MPDATA,DENS, 3, 1, .81310E+04,
MPDATA,DENS, 4, 1, .10970E+05,
MPDATA,DENS, 5, 1, .65000E+04,
MPDATA,DENS, 6, 1, .65000E+04,
MPDATA,DENS,11, 1, .26900E+04,
MPDATA,DENS,12, 1, .89330E+04,
MPDATA,DENS,13, 1, .26930E+04,
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MPDATA,EMIS, 1, 1, .60000E+00,
MPDATA,EMIS, 2, 1, .80000E+00,
MPDATA,EMIS, 3, 1, .80000E+00,
MPDATA,EMIS, 4, 1, .79000E+00,
MPDATA,EMIS, 5, 1, .80600E+00,
MPDATA,EMIS, 6, 1, .80600E+00,
MPDATA,EMIS,11, 1, .07000E+00,
MPDATA,EMIS,12, 1, .50000E+00,
MPDATA,EMIS,13, 1, .07000E+00,
/COM,
/COM, Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15
MPDATA, C, 4, 1, .24700E+03,
MPDATA, C, 5, 1, .33000E+03,
MPDATA, C, 6, 1, .33000E+03,
MPDATA, C, 7, 1, .51930E+04,
MPDATA, C,11, 1, .90000E+03,
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/COM, Define K and C for materials 1, 3
MPTEMP
MPTEMP, 1, 21.11, 37.78, 65.56, 93.33, 121.11, 148.89,
MPTEMP, 7, 176.67, 204.44, 232.22, 260.00, 287.78, 315.56,
MPTEMP, 13, 343.33, 371.11, 398.89, 426.67, 454.44, 482.22,
MPTEMP, 19, 510.00, 537.78, 565.56, 593.33, 621.11, 648.89,
MPTEMP, 25, 676.67, 704.44, 732.22, 760.00, 787.78, 815.56,
MPDATA, KXX, 1, 1, 13.33, 13.67, 14.19, 14.54, 15.06, 15.58,
MPDATA, KXX, 1, 7, 15.92, 16.44, 16.96, 17.31, 17.83, 18.17,
MPDATA, KXX, 1,13, 18.52, 19.04, 19.38, 19.90, 20.25, 20.77,

```

MPDATA, KXX, 1, 19, 21.11, 21.46, 21.98, 22.33, 22.67, 23.02,
 MPDATA, KXX, 1, 25, 23.54, 23.88, 24.23, 24.58, 24.92, 25.27,
 MPDATA, C, 1, 1, 481.68, 486.92, 498.09, 499.38, 509.98, 520.29,
 MPDATA, C, 1, 7, 521.07, 527.38, 536.92, 537.34, 543.02, 543.31,
 MPDATA, C, 1, 13, 546.91, 552.14, 552.26, 557.22, 557.25, 565.11,
 MPDATA, C, 1, 19, 565.01, 564.91, 572.35, 572.14, 574.92, 574.68,
 MPDATA, C, 1, 25, 581.64, 581.30, 583.86, 586.36, 585.96, 588.39,
 MPDATA, KXX, 3, 1, 40.84, 41.36, 41.88, 42.23, 42.23, 42.23,
 MPDATA, KXX, 3, 7, 42.06, 41.88, 41.36, 41.02, 40.50, 39.98,
 MPDATA, KXX, 3, 13, 39.29, 38.77, 38.08, 37.56, 36.69, 36.17,
 MPDATA, KXX, 3, 19, 35.48, 34.61, 33.92, 33.23, 32.36, 31.50,
 MPDATA, KXX, 3, 25, 30.29, 28.90, 27.35, 26.48, 26.13, 26.13,
 MPDATA, C, 3, 1, 428.72, 444.95, 460.94, 476.87, 486.08, 495.66,
 MPDATA, C, 3, 7, 506.09, 517.07, 525.64, 536.99, 543.63, 550.62,
 MPDATA, C, 3, 13, 562.21, 577.32, 589.10, 600.57, 611.35, 629.09,
 MPDATA, C, 3, 19, 645.32, 665.12, 682.07, 694.52, 724.07, 761.95,
 MPDATA, C, 3, 25, 806.31, 888.60, 1095.04, 1638.78, 808.68, 736.90,

/COM,

Define K for material 2

MPTEMP

MPTEMP, 1, 93.33, 121.11, 148.89, 176.67, 204.44, 232.22,
 MPTEMP, 7, 260.00, 287.78, 315.56, 343.33, 371.11, 398.89,
 MPTEMP, 13, 426.67, 454.44, 482.22, 510.00, 537.78, 565.56,
 MPTEMP, 19, 593.33, 621.11, 648.89, 676.67, 704.44, 732.22,
 MPTEMP, 25, 760.00, 787.78, 815.56,
 MPDATA, KXX, 2, 1, 12.29, 12.63, 13.15, 13.67, 14.02, 14.54,
 MPDATA, KXX, 2, 7, 14.88, 15.40, 15.75, 16.10, 16.61, 16.96,
 MPDATA, KXX, 2, 13, 17.31, 17.65, 18.00, 18.52, 18.86, 19.21,
 MPDATA, KXX, 2, 19, 19.73, 20.08, 20.42, 20.94, 21.46, 21.98,
 MPDATA, KXX, 2, 25, 22.33, 23.02, 23.54,

/COM,

Define C for material 2

MPTEMP

MPTEMP, 1, 93.33, 121.11, 148.89, 176.67, 204.44, 232.22,
 MPTEMP, 7, 260.00, 287.78, 315.56, 343.33, 371.11, 398.89,
 MPTEMP, 13, 426.67, 454.44, 482.22, 510.00, 537.78,
 MPDATA, C, 2, 1, 460.69, 477.42, 501.02, 504.65, 498.12, 520.45,
 MPDATA, C, 2, 7, 536.88, 559.85, 576.83, 576.21, 581.68, 598.20,
 MPDATA, C, 2, 13, 619.58, 636.76, 654.20, 678.25, 696.29,

/COM,

Define K for materials 4, 5, 6

MPTEMP

MPTEMP, 1, 0.0, 10.0, 20.0, 30.0, 40.0, 50.0,
 MPTEMP, 7, 60.0, 70.0, 80.0, 90.0, 100.0, 110.0,
 MPTEMP, 13, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0,
 MPTEMP, 19, 180.0, 190.0, 200.0, 210.0, 220.0, 230.0,
 MPTEMP, 25, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0,
 MPTEMP, 31, 300.0, 310.0, 320.0, 330.0, 340.0, 350.0,
 MPTEMP, 37, 360.0, 370.0, 380.0, 390.0, 400.0, 410.0,
 MPTEMP, 43, 420.0, 430.0, 440.0, 450.0, 460.0, 470.0,
 MPTEMP, 48, 480.0, 490.0, 500.0,
 MPDATA, KXX, 4, 1, 8.72, 8.54, 8.36, 8.19, 8.03, 7.87,
 MPDATA, KXX, 4, 7, 7.72, 7.58, 7.44, 7.31, 7.18, 7.05,
 MPDATA, KXX, 4, 13, 6.93, 6.82, 6.70, 6.60, 6.49, 6.39,
 MPDATA, KXX, 4, 19, 6.29, 6.19, 6.10, 6.01, 5.92, 5.84,
 MPDATA, KXX, 4, 25, 5.76, 5.68, 5.60, 5.52, 5.45, 5.38,
 MPDATA, KXX, 4, 31, 5.31, 5.24, 5.18, 5.11, 5.05, 4.99,
 MPDATA, KXX, 4, 37, 4.93, 4.87, 4.81, 4.76, 4.70, 4.65,
 MPDATA, KXX, 4, 43, 4.60, 4.55, 4.50, 4.45, 4.40, 4.35,
 MPDATA, KXX, 4, 48, 4.31, 4.27, 4.22,
 MPDATA, KXX, 5, 1, 12.29, 12.44, 12.58, 12.72, 12.87, 13.01,
 MPDATA, KXX, 5, 7, 13.15, 13.28, 13.42, 13.55, 13.69, 13.82,
 MPDATA, KXX, 5, 13, 13.95, 14.08, 14.21, 14.34, 14.46, 14.59,
 MPDATA, KXX, 5, 19, 14.72, 14.84, 14.96, 15.09, 15.21, 15.33,
 MPDATA, KXX, 5, 25, 15.45, 15.57, 15.69, 15.81, 15.93, 16.05,
 MPDATA, KXX, 5, 31, 16.17, 16.29, 16.40, 16.52, 16.64, 16.76,
 MPDATA, KXX, 5, 37, 16.88, 16.99, 17.11, 17.23, 17.35, 17.46,
 MPDATA, KXX, 5, 43, 17.58, 17.70, 17.82, 17.94, 18.06, 18.18,
 MPDATA, KXX, 5, 48, 18.30, 18.42, 18.54,
 MPDATA, KXX, 6, 1, 1.94, 1.94, 1.94, 1.94, 1.94, 1.94,

```

MPDATA, KXX, 6, 7, 1.94, 1.95, 1.95, 1.95, 1.95, 1.95,
MPDATA, KXX, 6, 13, 1.95, 1.95, 1.96, 1.96, 1.96, 1.96,
MPDATA, KXX, 6, 19, 1.96, 1.96, 1.97, 1.97, 1.97, 1.98,
MPDATA, KXX, 6, 25, 1.98, 1.98, 1.98, 1.99, 1.99, 1.99,
MPDATA, KXX, 6, 31, 2.00, 2.00, 2.00, 2.01, 2.01, 2.01,
MPDATA, KXX, 6, 37, 2.02, 2.02, 2.02, 2.03, 2.03, 2.03,
MPDATA, KXX, 6, 43, 2.04, 2.04, 2.04, 2.05, 2.05, 2.06,
MPDATA, KXX, 6, 48, 2.06, 2.06, 2.07,

```

```

/COM,

```

```

Define p, K, C for materials 7, 8, 9, -10

```

```

MPTEMP

```

```

MPTEMP, 1, -13.15, 6.85, 26.85, 76.85, 126.85, 176.85,

```

```

MPTEMP, 7, 226.85, 276.85, 326.85, 376.85, 426.85, 476.85,

```

```

MPTEMP, 13, 526.85, 626.85, 726.85,

```

```

MPDATA, DENS, 7, 1, 0.1875, 0.1750, 0.1625, 0.1422, 0.1219, 0.1097,

```

```

MPDATA, DENS, 7, 7, 0.0975, 0.0906, 0.0836, 0.0767, 0.0697, 0.0662,

```

```

MPDATA, DENS, 7, 13, 0.0627, 0.0558, 0.0488,

```

```

MPDATA, KXX, 7, 1, 0.1370, 0.1450, 0.1520, 0.1700, 0.1870, 0.2040,

```

```

MPDATA, KXX, 7, 7, 0.2200, 0.2360, 0.2520, 0.2640, 0.2780, 0.2910,

```

```

MPDATA, KXX, 7, 13, 0.3040, 0.3300, 0.3540,

```

```

MPDATA, DENS, 8, 1, 1.3480, 1.2547, 1.1614, 0.9950, 0.8711, 0.7740,

```

```

MPDATA, DENS, 8, 7, 0.6964, 0.6329, 0.5804, 0.5356, 0.4975, 0.4643,

```

```

MPDATA, DENS, 8, 13, 0.4354, 0.3868, 0.3482,

```

```

MPDATA, KXX, 8, 1, 0.0230, 0.0250, 0.0260, 0.0300, 0.0340, 0.0370,

```

```

MPDATA, KXX, 8, 7, 0.0410, 0.0440, 0.0470, 0.0500, 0.0520, 0.0550,

```

```

MPDATA, KXX, 8, 13, 0.0570, 0.0620, 0.0670,

```

```

MPDATA, C, 8, 1, 1006.2, 1006.6, 1007.0, 1009.0, 1014.0, 1021.0,

```

```

MPDATA, C, 8, 7, 1030.0, 1040.0, 1051.0, 1063.0, 1075.0, 1087.0,

```

```

MPDATA, C, 8, 13, 1099.0, 1121.0, 1141.0,

```

```

MPDATA, DENS, 9, 1, 1.3037, 1.2135, 1.1233, 0.9625, 0.8425, 0.7485,

```

```

MPDATA, DENS, 9, 7, 0.6739, 0.6124, 0.5615, 0.5214, 0.4812, 0.4512,

```

```

MPDATA, DENS, 9, 13, 0.4211, 0.3743, 0.3368,

```

```

MPDATA, KXX, 9, 1, 0.0230, 0.0240, 0.0260, 0.0290, 0.0330, 0.0360,

```

```

MPDATA, KXX, 9, 7, 0.0390, 0.0420, 0.0450, 0.0470, 0.0500, 0.0520,

```

```

MPDATA, KXX, 9, 13, 0.0550, 0.0600, 0.0650,

```

```

MPDATA, C, 9, 1, 1041.8, 1041.4, 1041.0, 1042.0, 1045.0, 1050.0,

```

```

MPDATA, C, 9, 7, 1056.0, 1065.0, 1075.0, 1086.5, 1098.0, 1159.0,

```

```

MPDATA, C, 9, 13, 1220.0, 1146.0, 1167.0,

```

```

MPDATA, KXX, 10, 1, 0.0170, 0.0170, 0.0180, 0.0210, 0.0230, 0.0250,

```

```

MPDATA, KXX, 10, 7, 0.0270, 0.0280, 0.0300, 0.0320, 0.0340, 0.0360,

```

```

MPDATA, KXX, 10, 13, 0.0370, 0.0410, 0.0440,

```

```

/COM,

```

```

Define K and C for material 12

```

```

MPTEMP

```

```

MPTEMP, 1, -73.15, 26.85, 126.85, 326.85, 526.85, 726.85,

```

```

MPDATA, KXX, 12, 1, 413.0, 401.0, 393.0, 379.0, 366.0, 352.0,

```

```

MPDATA, C, 12, 1, 356.0, 385.0, 397.0, 417.0, 433.0, 451.0,

```

```

/COM,

```

```

Define K and C for material 13

```

```

MPTEMP

```

```

MPTEMP, 1, 23.00, 50.00, 100.00, 150.00, 200.00,

```

```

MPDATA, KXX, 13, 1, 182.56, 190.17, 199.22, 202.91, 203.72,

```

```

MPDATA, C, 13, 1, 868.00, 903.00, 946.00, 976.00, 998.00,

```

```

/COM,

```

```

*****

```

```

/COM, ** End of Material Property List **

```

```

/COM, *****

```

```

/EOF,

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```

/COM, *****

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*SET,CELLT , .1000000000000E-01
*SET,CELLW , .2235000000000
*SET,CIRAD , .4787900000000E-02
*SET,CORAD , .5461000000000E-02
*SET,GIRAD , .6324600000000E-02
*SET,GORAD , .6731000000000E-02
*SET,HEAT , 6409.172635082
*SET,IINC , 10.00000000000
*SET,IIRAD , .5600700000000E-02
*SET,IORAD , .6261100000000E-02
*SET,ITIME , 37.00000000000
*SET,JINC , 5.000000000000
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*SET,KEFF ( 2, 0, 1), 50.00000000000
*SET,KEFF ( 3, 0, 1), 100.00000000000
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44 BWR UCF/Waste Package - 1/2 FEM Model

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4.473E+01 3.908E+01 3.589E+01 3.220E+01 2.999E+01 2.575E+01 2.135E+01 1.220E+01 4.378E+00 1.831E+00

.63115E+10	89.7566	89.7421	85.6692	85.5383	85.2693
.94673E+10	84.9191	84.9082	81.7964	81.6989	81.4969
.12623E+11	82.1292	82.1203	79.5563	79.4769	79.3123
.15779E+11	80.1227	80.1151	77.9074	77.8399	77.6990
.18935E+11	78.2227	78.2161	76.2841	76.2253	76.1029
.22090E+11	76.6239	76.6181	74.8955	74.8437	74.7351
.25246E+11	75.2170	75.2118	73.6676	73.6214	73.5247
.28402E+11	73.9912	73.9866	72.5856	72.5441	72.4566
.31558E+11	72.9437	72.9394	71.6559	71.6179	71.5383

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 64530.790 TIME= 06:24:07
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045

VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045

VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045

VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045

VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045

VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045

VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045

VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045

VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045

VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045

VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045

VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045

VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045

VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045

VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045

VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045

VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045

VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045

VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045

VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045
 Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045

VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts1i045	75.71	.3156E+11	208.0	.3156E+08
3 NSOL	1017 TEMP	t01i045	75.71	.3156E+11	208.0	.3156E+08
4 NSOL	1025 TEMP	s01i045	75.71	.3156E+11	208.0	.3156E+08
5 NSOL	1124 TEMP	h01i045	76.34	.3156E+11	218.4	.3156E+08
6 NSOL	1136 TEMP	c01i045	77.11	.3156E+11	230.9	.3156E+08
7 NSOL	1148 TEMP	h01o045	77.53	.3156E+11	238.3	.3156E+08
8 NSOL	1051 TEMP	s01o045	77.70	.3156E+11	241.4	.3156E+08
9 NSOL	1043 TEMP	t01o045	77.72	.3156E+11	241.7	.3156E+08
10 NSOL	2040 TEMP	s11i045	77.73	.3156E+11	242.0	.3156E+08
11 NSOL	2139 TEMP	h11i045	78.26	.3156E+11	248.6	.2840E+08
12 NSOL	2151 TEMP	c11i045	78.38	.3156E+11	248.5	.2840E+08
13 NSOL	2163 TEMP	h11o045	77.87	.3156E+11	238.9	.3156E+08
14 NSOL	2066 TEMP	s11o045	76.96	.3156E+11	222.2	.3156E+08
15 NSOL	2058 TEMP	t11o045	76.92	.3156E+11	221.5	.3156E+08
16 NSOL	2910 TEMP	s19i045	76.88	.3156E+11	220.7	.3156E+08
17 NSOL	3009 TEMP	h19i045	76.25	.3156E+11	206.7	.3156E+08
18 NSOL	3021 TEMP	c19i045	75.16	.3156E+11	185.5	.6312E+08
19 NSOL	3033 TEMP	h19o045	73.52	.3156E+11	154.8	.9467E+08
20 NSOL	2936 TEMP	s19o045	35.53	.1000E-05	124.2	.2525E+09
21 NSOL	2928 TEMP	t19o045	34.03	.1000E-05	123.3	.2525E+09
22 NSOL	4182 TEMP	i19o045	29.45	.1000E-05	120.4	.2525E+09
23 NSOL	4411 TEMP	o19o045	26.14	.1000E-05	118.3	.2525E+09
24 NSOL	2876 TEMP	c13i045	76.76	.3156E+11	216.3	.3156E+08
25 NSOL	2296 TEMP	c17i045	76.80	.3156E+11	216.7	.3156E+08
26 NSOL	1490 TEMP	s21o000	66.48	.1000E-05	144.4	.1262E+09
27 NSOL	1482 TEMP	t21o000	66.37	.1000E-05	144.3	.1262E+09
28 NSOL	4217 TEMP	i21i000	29.31	.1000E-05	121.8	.2525E+09
29 NSOL	4207 TEMP	i21o000	28.35	.1000E-05	120.9	.2525E+09
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	119.3	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	139.403	139.403	139.409	152.795	168.730	177.938
.20000E-05	176.866	176.866	176.872	188.758	203.085	211.448
31.558	176.866	176.866	176.872	188.758	203.085	211.447
.31558E+07	198.961	198.970	198.979	210.059	223.400	231.222
.63116E+07	202.543	202.553	202.562	213.488	226.660	234.387
.94673E+07	204.342	204.352	204.361	215.179	228.228	235.885
.12623E+08	205.492	205.502	205.511	216.245	229.196	236.797
.15779E+08	206.290	206.300	206.308	216.971	229.840	237.393
.18935E+08	206.854	206.863	206.872	217.472	230.268	237.779
.22090E+08	207.272	207.281	207.290	217.834	230.564	238.036
.25246E+08	207.580	207.590	207.599	218.090	230.759	238.195
.28402E+08	207.803	207.813	207.821	218.265	230.876	238.279
.31558E+08	207.962	207.971	207.980	218.377	230.935	238.305
.63115E+08	207.934	207.944	207.952	217.994	230.130	237.246
.94673E+08	206.675	206.684	206.692	216.464	228.276	235.196
.12623E+09	205.094	205.102	205.111	214.657	226.197	232.952
.15779E+09	203.539	203.548	203.556	212.911	224.222	230.837
.18935E+09	201.720	201.728	201.736	210.899	221.977	228.451
.22090E+09	200.090	200.099	200.106	209.102	219.979	226.330
.25246E+09	198.631	198.639	198.647	207.484	218.168	224.402
.28402E+09	196.610	196.618	196.626	205.328	215.850	221.983
.31558E+09	195.004	195.012	195.019	203.603	213.985	220.033
.63115E+09	179.627	179.634	179.640	187.046	196.030	201.247
.94673E+09	166.633	166.639	166.644	173.127	180.989	185.533

.12623E+10	155.183	155.189	155.193	160.947	167.915	171.915
.15779E+10	145.629	145.634	145.638	150.755	156.949	160.479
.18935E+10	137.929	137.933	137.937	142.524	148.083	151.241
.22090E+10	131.546	131.550	131.554	135.698	140.720	143.567
.25246E+10	125.848	125.852	125.855	129.633	134.210	136.800
.28402E+10	121.442	121.445	121.448	124.930	129.149	131.532
.31558E+10	117.550	117.553	117.555	120.765	124.654	126.847
.63115E+10	98.8937	98.8958	98.8973	100.855	103.227	104.551
.94673E+10	91.8234	91.8250	91.8262	93.3348	95.1631	96.1810
.12623E+11	87.7814	87.7828	87.7837	89.0331	90.5461	91.3864
.15779E+11	84.9665	84.9677	84.9685	86.0462	87.3513	88.0747
.18935E+11	82.4446	82.4456	82.4464	83.3918	84.5360	85.1691
.22090E+11	80.3739	80.3748	80.3755	81.2200	82.2419	82.8061
.25246E+11	78.5670	78.5679	78.5685	79.3269	80.2441	80.7500
.28402E+11	77.0209	77.0217	77.0222	77.7113	78.5446	79.0034
.31558E+11	75.7113	75.7121	75.7126	76.3449	77.1093	77.5299

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.880
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.225	182.618	182.986	192.562	194.134	184.165
.20000E-05	215.156	215.490	215.802	223.823	224.424	214.445
31.558	215.156	215.491	215.802	223.823	224.423	214.444
.31558E+07	234.618	234.919	235.199	242.324	242.418	232.600
.63116E+07	237.724	238.020	238.295	245.288	245.310	235.506
.94673E+07	239.181	239.473	239.745	246.647	246.628	236.858
.12623E+08	240.060	240.350	240.619	247.454	247.406	237.670
.15779E+08	240.631	240.918	241.185	247.964	247.896	238.194
.18935E+08	240.994	241.279	241.544	248.277	248.194	238.525
.22090E+08	241.230	241.514	241.777	248.469	248.374	238.738
.25246E+08	241.370	241.653	241.914	248.569	248.466	238.861
.28402E+08	241.436	241.717	241.977	248.599	248.489	238.915
.31558E+08	241.447	241.726	241.985	248.575	248.460	238.916
.63115E+08	240.262	240.531	240.781	247.147	247.014	237.743
.94673E+08	238.119	238.381	238.624	244.833	244.710	235.676
.12623E+09	235.799	236.055	236.293	242.377	242.272	233.447
.15779E+09	233.621	233.872	234.104	240.086	239.999	231.355
.18935E+09	231.172	231.418	231.646	237.525	237.460	229.004
.22090E+09	228.996	229.238	229.462	235.252	235.207	226.914
.25246E+09	227.017	227.255	227.476	233.180	233.150	225.011
.28402E+09	224.554	224.789	225.007	230.647	230.643	222.647
.31558E+09	222.568	222.800	223.015	228.599	228.613	220.738
.63115E+09	203.423	203.627	203.817	208.813	208.987	202.272
.94673E+09	187.428	187.609	187.778	192.276	192.551	186.747
.12623E+10	173.580	173.743	173.894	177.981	178.325	173.249
.15779E+10	161.937	162.083	162.219	165.926	166.312	161.851
.18935E+10	152.536	152.667	152.790	156.177	156.583	152.614
.22090E+10	144.733	144.852	144.964	148.067	148.477	144.913
.25246E+10	137.860	137.969	138.072	140.932	141.340	138.115
.28402E+10	132.507	132.608	132.703	135.363	135.764	132.809
.31558E+10	127.743	127.837	127.925	130.396	130.786	128.076
.63115E+10	105.088	105.146	105.201	106.766	107.065	105.450
.94673E+10	96.5919	96.6370	96.6795	97.9028	98.1502	96.9131
.12623E+11	91.7245	91.7619	91.7972	92.8175	93.0299	92.0102
.15779E+11	88.3654	88.3978	88.4283	89.3120	89.4995	88.6226
.18935E+11	85.4226	85.4510	85.4778	86.2565	86.4247	85.6579
.22090E+11	83.0316	83.0570	83.0810	83.7790	83.9323	83.2491
.25246E+11	80.9517	80.9745	80.9960	81.6249	81.7647	81.1529
.28402E+11	79.1862	79.2069	79.2265	79.7994	79.9284	79.3736

.31558E+11 77.6971 77.7161 77.7341 78.2611 78.3808 77.8730

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.900
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	165.513	164.687	163.835	149.017	123.959	83.2196
.20000E-05	196.439	195.627	194.788	179.980	156.189	119.210
.31558E+07	196.439	195.627	194.788	179.979	156.190	119.211
.63116E+07	215.246	214.454	213.637	199.084	176.302	141.786
.94673E+07	218.247	217.459	216.646	202.153	179.547	145.473
.12623E+08	219.694	218.910	218.101	203.679	181.223	147.475
.15779E+08	220.591	219.810	219.005	204.647	182.321	148.836
.18935E+08	221.192	220.414	219.613	205.314	183.106	149.848
.22090E+08	221.594	220.820	220.021	205.781	183.681	150.627
.25246E+08	221.875	221.104	220.308	206.123	184.126	151.259
.28402E+08	222.063	221.294	220.502	206.371	184.471	151.779
.31558E+08	222.179	221.414	220.625	206.546	184.740	152.213
.63115E+08	222.242	221.479	220.693	206.666	184.950	152.579
.94673E+08	221.580	220.842	220.080	206.502	185.531	154.406
.12623E+09	219.938	219.220	218.479	205.282	184.921	154.770
.15779E+09	218.078	217.378	216.656	203.794	183.958	154.628
.18935E+09	216.304	215.619	214.913	202.340	182.955	154.319
.22090E+09	214.279	213.610	212.920	200.645	181.722	153.788
.25246E+09	212.473	211.817	211.142	199.125	180.603	153.276
.28402E+09	210.838	210.195	209.533	197.760	179.615	152.858
.31558E+09	208.715	208.085	207.435	195.887	178.081	151.817
.63115E+09	207.012	206.391	205.751	194.395	176.875	151.031
.94673E+09	190.538	190.014	189.474	179.951	165.168	143.341
.12623E+10	176.590	176.140	175.677	167.569	154.882	136.128
.15779E+10	164.334	163.944	163.542	156.535	145.461	129.082
.18935E+10	153.995	153.654	153.303	147.206	137.503	123.125
.22090E+10	145.610	145.308	144.997	139.618	131.009	118.230
.25246E+10	138.621	138.351	138.074	133.280	125.574	114.114
.28402E+10	132.411	132.168	131.917	127.604	120.636	110.256
.31558E+10	127.573	127.351	127.122	123.187	116.807	107.288
.63115E+10	123.269	123.065	122.855	119.262	113.416	104.684
.94673E+10	102.566	102.446	102.323	100.228	96.7583	91.5517
.12623E+11	94.7010	94.6095	94.5154	92.9265	90.2792	86.2950
.15779E+11	90.1845	90.1093	90.0320	88.7299	86.5508	83.2648
.18935E+11	87.0512	86.9866	86.9202	85.8037	83.9300	81.1007
.22090E+11	84.2824	84.2261	84.1681	83.1954	81.5577	79.0812
.25246E+11	82.0229	81.9728	81.9213	81.0573	79.5991	77.3909
.28402E+11	80.0537	80.0089	79.9628	79.1911	77.8853	75.9055
.31558E+11	78.3767	78.3361	78.2943	77.5962	76.4128	74.6164
	76.9595	76.9224	76.8841	76.2463	75.1628	73.5164

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
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.10000E-05	35.5294	34.0292	29.4547	26.1400	160.477	160.477
.20000E-05	77.3344	76.0231	71.8872	68.8425	190.830	190.836
31.558	77.3343	76.0230	71.8872	68.8425	190.829	190.836
.31558E+07	103.591	102.397	98.5608	95.6848	209.243	209.623
.63116E+07	107.908	106.735	102.959	100.117	212.221	212.610
.94673E+07	110.352	109.194	105.462	102.653	213.672	214.062
.12623E+08	112.066	110.920	107.223	104.441	214.578	214.969
.15779E+08	113.378	112.242	108.574	105.815	215.191	215.582
.18935E+08	114.422	113.294	109.653	106.915	215.608	215.999
.22090E+08	115.295	114.175	110.558	107.838	215.905	216.296
.25246E+08	116.039	114.926	111.331	108.629	216.110	216.501
.28402E+08	116.681	115.575	112.001	109.315	216.244	216.635
.31558E+08	117.246	116.146	112.592	109.921	216.325	216.715
.63115E+08	120.605	119.555	116.156	113.605	215.838	216.224
.94673E+08	122.140	121.128	117.849	115.389	214.358	214.740
.12623E+09	122.968	121.987	118.808	116.424	212.647	213.025
.15779E+09	123.473	122.518	119.422	117.102	211.003	211.377
.18935E+09	123.756	122.826	119.815	117.557	209.113	209.483
.22090E+09	123.943	123.036	120.096	117.893	207.425	207.791
.25246E+09	124.184	123.297	120.425	118.273	205.899	206.262
.28402E+09	123.699	122.829	120.014	117.906	203.886	204.242
.31558E+09	123.387	122.532	119.765	117.694	202.272	202.623
.63115E+09	120.186	119.471	117.162	115.436	186.650	186.959
.94673E+09	116.330	115.720	113.754	112.284	173.372	173.646
.12623E+10	111.824	111.292	109.583	108.307	161.633	161.877
.15779E+10	108.004	107.538	106.046	104.930	151.696	151.916
.18935E+10	104.810	104.397	103.075	102.087	143.610	143.811
.22090E+10	102.094	101.723	100.541	99.6582	136.865	137.050
.25246E+10	99.3751	99.0400	97.9713	97.1760	130.853	131.022
.28402E+10	97.3167	97.0097	96.0313	95.3055	126.168	126.326
.31558E+10	95.5429	95.2615	94.3653	93.7024	121.997	122.146
.63115E+10	86.1279	85.9610	85.4334	85.0458	101.866	101.963
.94673E+10	82.1445	82.0167	81.6142	81.3189	94.1803	94.2580
.12623E+11	79.8416	79.7362	79.4045	79.1617	89.7637	89.8298
.15779E+11	78.1522	78.0613	77.7760	77.5670	86.6934	86.7515
.18935E+11	76.4999	76.4203	76.1705	75.9880	83.9742	84.0249
.22090E+11	75.0883	75.0173	74.7950	74.6323	81.7517	81.7971
.25246E+11	73.8407	73.7770	73.5775	73.4320	79.8134	79.8544
.28402E+11	72.7422	72.6844	72.5038	72.3717	78.1607	78.1983
.31558E+11	71.7985	71.7456	71.5798	71.4590	76.7631	76.7982

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64534.050 TIME= 06:24:10
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	NSOL	3824 TEMP	ts2i180	75.71	.3156E+11	207.8	.3156E+08
3	NSOL	1021 TEMP	t02i180	75.71	.3156E+11	207.8	.3156E+08
4	NSOL	1031 TEMP	s02i180	75.72	.3156E+11	207.9	.3156E+08
5	NSOL	1122 TEMP	h02i180	76.63	.3156E+11	223.1	.3156E+08
6	NSOL	1136 TEMP	c02i180	77.11	.3156E+11	230.9	.3156E+08
7	NSOL	1150 TEMP	h02o180	77.25	.3156E+11	233.6	.3156E+08
8	NSOL	1079 TEMP	s02o180	77.05	.3156E+11	231.1	.3156E+08
9	NSOL	1071 TEMP	t02o180	77.05	.3156E+11	231.1	.3156E+08
10	NSOL	1901 TEMP	s10i180	77.05	.3156E+11	231.1	.3156E+08
11	NSOL	1992 TEMP	h10i180	77.42	.3156E+11	235.7	.3156E+08
12	NSOL	2006 TEMP	c10i180	77.46	.3156E+11	235.4	.3156E+08
13	NSOL	2020 TEMP	h10o180	77.22	.3156E+11	231.0	.3156E+08
14	NSOL	1949 TEMP	s10o180	76.65	.3156E+11	221.5	.3156E+08
15	NSOL	1941 TEMP	t10o180	76.65	.3156E+11	221.5	.3156E+08
16	NSOL	2626 TEMP	s16i180	76.65	.3156E+11	221.5	.3156E+08
17	NSOL	2717 TEMP	h16i180	76.69	.3156E+11	220.0	.3156E+08
18	NSOL	2731 TEMP	c16i180	76.41	.3156E+11	213.7	.3156E+08
19	NSOL	2745 TEMP	h16o180	75.85	.3156E+11	202.9	.6312E+08
20	NSOL	2674 TEMP	s16o180	74.98	.3156E+11	187.2	.6312E+08
21	NSOL	2666 TEMP	t16o180	74.98	.3156E+11	187.2	.6312E+08
22	NSOL	3061 TEMP	s22i180	74.98	.3156E+11	187.1	.6312E+08
23	NSOL	3152 TEMP	h22i180	74.90	.3156E+11	183.8	.6312E+08
24	NSOL	3166 TEMP	c22i180	74.52	.3156E+11	175.9	.6312E+08
25	NSOL	3180 TEMP	h22o180	73.86	.3156E+11	163.1	.9467E+08
26	NSOL	3109 TEMP	s22o180	66.48	.1000E-05	142.8	.1262E+09
27	NSOL	3101 TEMP	t22o180	66.37	.1000E-05	142.7	.1262E+09
28	NSOL	4254 TEMP	i22i180	29.31	.1000E-05	119.9	.2525E+09

29 NSOL 4157 TEMP i22o180 28.35 .1000E-05 119.0 .2525E+09
30 NSOL 4385 TEMP o22o180 26.14 .1000E-05 117.3 .2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.790
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.529	176.540	176.643	194.052	203.085	206.136
31.558	176.530	176.541	176.643	194.052	203.085	206.136
.31558E+07	198.810	198.821	198.920	215.042	223.400	226.220
.63116E+07	202.396	202.407	202.505	218.407	226.660	229.445
.94673E+07	204.197	204.207	204.305	220.051	228.228	230.988
.12623E+08	205.347	205.358	205.455	221.079	229.196	231.935
.15779E+08	206.146	206.157	206.254	221.775	229.840	232.562
.18935E+08	206.711	206.722	206.818	222.248	230.268	232.975
.22090E+08	207.130	207.141	207.236	222.585	230.564	233.256
.25246E+08	207.440	207.450	207.545	222.819	230.759	233.438
.28402E+08	207.663	207.674	207.769	222.972	230.876	233.543
.31558E+08	207.823	207.833	207.928	223.064	230.935	233.590
.63115E+08	207.803	207.813	207.904	222.523	230.130	232.692
.94673E+08	206.551	206.560	206.649	220.872	228.276	230.766
.12623E+09	204.975	204.984	205.070	218.964	226.197	228.627
.15779E+09	203.425	203.435	203.518	217.133	224.222	226.600
.18935E+09	201.611	201.620	201.702	215.034	221.977	224.303
.22090E+09	199.986	199.995	200.075	213.163	219.979	222.259
.25246E+09	198.530	198.539	198.617	211.473	218.168	220.406
.28402E+09	196.512	196.520	196.597	209.257	215.850	218.050
.31558E+09	194.907	194.915	194.991	207.479	213.985	216.154
.63115E+09	179.554	179.561	179.624	190.397	196.030	197.896
.94673E+09	166.577	166.583	166.636	176.061	180.989	182.607
.12623E+10	155.138	155.143	155.189	163.548	167.915	169.334
.15779E+10	145.593	145.597	145.637	153.068	156.949	158.196
.18935E+10	137.900	137.904	137.939	144.598	148.083	149.197
.22090E+10	131.524	131.527	131.559	137.572	140.720	141.722
.25246E+10	125.830	125.833	125.861	131.342	134.210	135.120
.28402E+10	121.427	121.429	121.455	126.506	129.149	129.986
.31558E+10	117.538	117.540	117.564	122.218	124.654	125.422
.63115E+10	98.8906	98.8920	98.9058	101.742	103.227	103.687
.94673E+10	91.8227	91.8237	91.8342	94.0182	95.1631	95.5159
.12623E+11	87.7818	87.7827	87.7913	89.5988	90.5461	90.8366
.15779E+11	84.9673	84.9681	84.9754	86.5344	87.3513	87.6010
.18935E+11	82.4454	82.4460	82.4525	83.8198	84.5360	84.7543
.22090E+11	80.3747	80.3753	80.3810	81.6022	82.2419	82.4362
.25246E+11	78.5680	78.5685	78.5736	79.6700	80.2441	80.4182
.28402E+11	77.0219	77.0224	77.0270	78.0231	78.5446	78.7023
.31558E+11	75.7126	75.7131	75.7173	76.6310	77.1093	77.2537

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.800
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP	1071 TEMP	1901 TEMP	1992 TEMP	2006 TEMP	2020 TEMP
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	s02o180	t02o180	s10i180	h10i180	c10i180	h10o180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.239	203.237	203.252	208.860	208.928	204.158
31.558	203.240	203.237	203.253	208.860	208.927	204.158
.31558E+07	223.555	223.552	223.566	228.511	228.353	223.718
.63116E+07	226.814	226.812	226.825	231.674	231.487	226.875
.94673E+07	228.381	228.378	228.392	233.178	232.975	228.388
.12623E+08	229.347	229.344	229.358	234.097	233.884	229.318
.15779E+08	229.989	229.987	230.000	234.701	234.481	229.936
.18935E+08	230.416	230.413	230.426	235.095	234.870	230.344
.22090E+08	230.709	230.706	230.719	235.361	235.132	230.624
.25246E+08	230.902	230.899	230.912	235.529	235.298	230.806
.28402E+08	231.017	231.014	231.027	235.621	235.388	230.913
.31558E+08	231.074	231.071	231.084	235.656	235.422	230.964
.63115E+08	230.248	230.246	230.258	234.678	234.446	230.125
.94673E+08	228.377	228.374	228.386	232.700	232.479	228.274
.12623E+09	226.282	226.280	226.291	230.522	230.315	226.210
.15779E+09	224.293	224.291	224.302	228.463	228.269	224.251
.18935E+09	222.034	222.031	222.043	226.136	225.956	222.026
.22090E+09	220.023	220.020	220.031	224.065	223.898	220.045
.25246E+09	218.200	218.198	218.209	222.185	222.029	218.249
.28402E+09	215.869	215.867	215.878	219.811	219.670	215.956
.31558E+09	213.996	213.994	214.004	217.900	217.770	214.112
.63115E+09	195.976	195.974	195.983	199.471	199.433	196.314
.94673E+09	180.885	180.884	180.892	184.033	184.058	181.364
.12623E+10	167.762	167.761	167.768	170.635	170.707	168.346
.15779E+10	156.761	156.760	156.766	159.375	159.474	157.395
.18935E+10	147.888	147.887	147.893	150.272	150.385	148.532
.22090E+10	140.527	140.527	140.531	142.707	142.825	141.162
.25246E+10	134.020	134.020	134.024	136.029	136.152	134.644
.28402E+10	128.964	128.963	128.967	130.832	130.955	129.572
.31558E+10	124.474	124.473	124.477	126.208	126.330	125.061
.63115E+10	103.086	103.085	103.087	104.185	104.284	103.523
.94673E+10	95.0453	95.0450	95.0468	95.9031	95.9857	95.4012
.12623E+11	90.4431	90.4429	90.4443	91.1586	91.2299	90.7471
.15779E+11	87.2597	87.2595	87.2608	87.8795	87.9425	87.5267
.18935E+11	84.4531	84.4529	84.4540	84.9994	85.0560	84.6920
.22090E+11	82.1657	82.1655	82.1665	82.6556	82.7074	82.3826
.25246E+11	80.1742	80.1741	80.1749	80.6156	80.6629	80.3717
.28402E+11	78.4797	78.4796	78.4804	78.8820	78.9257	78.6614
.31558E+11	77.0489	77.0488	77.0495	77.4188	77.4593	77.2171

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.810
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1949 TEMP s10o180	1941 TEMP t10o180	2626 TEMP s16i180	2717 TEMP h16i180	2731 TEMP c16i180	2745 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.633	193.596	193.577	192.674	186.104	174.369
31.558	193.633	193.596	193.577	192.674	186.104	174.369
.31558E+07	213.772	213.734	213.714	212.397	205.844	194.500
.63116E+07	217.027	216.990	216.970	215.601	209.067	197.805
.94673E+07	218.615	218.578	218.558	217.164	210.656	199.468
.12623E+08	219.608	219.571	219.551	218.143	211.659	200.534
.15779E+08	220.279	220.242	220.222	218.805	212.345	201.277
.18935E+08	220.735	220.699	220.679	219.257	212.821	201.805
.22090E+08	221.059	221.023	221.003	219.578	213.167	202.200
.25246E+08	221.284	221.247	221.227	219.802	213.414	202.494
.28402E+08	221.430	221.394	221.374	219.949	213.584	202.709
.31558E+08	221.518	221.482	221.462	220.039	213.696	202.864

.63115E+08	220.983	220.948	220.929	219.542	213.399	202.925
.94673E+08	219.373	219.339	219.320	217.983	212.013	201.832
.12623E+09	217.513	217.480	217.462	216.175	210.359	200.430
.15779E+09	215.728	215.696	215.678	214.437	208.754	199.041
.18935E+09	213.681	213.649	213.632	212.441	206.895	197.404
.22090E+09	211.854	211.823	211.807	210.658	205.231	195.934
.25246E+09	210.203	210.173	210.157	209.047	203.731	194.618
.28402E+09	208.038	208.008	207.993	206.927	201.715	192.769
.31558E+09	206.303	206.274	206.259	205.228	200.104	191.300
.63115E+09	189.590	189.566	189.554	188.831	184.556	177.112
.94673E+09	175.492	175.472	175.462	174.972	171.353	164.956
.12623E+10	163.143	163.126	163.118	162.804	159.690	154.105
.15779E+10	152.770	152.756	152.749	152.552	149.848	144.945
.18935E+10	144.389	144.376	144.370	144.246	141.865	137.513
.22090E+10	137.424	137.413	137.408	137.336	135.219	131.319
.25246E+10	131.240	131.230	131.226	131.194	129.292	125.764
.28402E+10	126.436	126.427	126.423	126.418	124.686	121.452
.31558E+10	122.172	122.164	122.160	122.176	120.595	117.630
.63115E+10	101.763	101.759	101.757	101.826	100.909	99.1433
.94673E+10	94.0440	94.0404	94.0389	94.1063	93.4110	92.0607
.12623E+11	89.6225	89.6196	89.6184	89.6819	89.1120	87.9989
.15779E+11	86.5563	86.5538	86.5528	86.6114	86.1227	85.1650
.18935E+11	83.8405	83.8383	83.8374	83.8927	83.4669	82.6292
.22090E+11	81.6218	81.6198	81.6191	81.6714	81.2932	80.5466
.25246E+11	79.6884	79.6867	79.6860	79.7353	79.3974	78.7284
.28402E+11	78.0404	78.0389	78.0382	78.0848	77.7792	77.1725
.31558E+11	76.6473	76.6459	76.6453	76.6894	76.4100	75.8543

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years.

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0555
.20000E-05	156.266	156.206	156.169	153.018	144.150	129.327
31.558	156.267	156.206	156.169	153.017	144.150	129.327
.31558E+07	177.358	177.296	177.258	173.826	165.215	151.060
.63116E+07	180.832	180.771	180.733	177.271	168.715	154.700
.94673E+07	182.626	182.565	182.527	179.057	170.550	156.646
.12623E+08	183.801	183.741	183.703	180.232	171.770	157.958
.15779E+08	184.640	184.579	184.541	181.074	172.654	158.922
.18935E+08	185.255	185.195	185.157	181.696	173.315	159.657
.22090E+08	185.730	185.670	185.633	182.179	173.835	160.247
.25246E+08	186.100	186.041	186.003	182.559	174.250	160.727
.28402E+08	186.388	186.328	186.291	182.856	174.582	161.121
.31558E+08	186.613	186.554	186.516	183.091	174.851	161.450
.63115E+08	187.239	187.182	187.145	183.824	175.870	162.956
.94673E+08	186.599	186.544	186.509	183.289	175.573	163.052
.12623E+09	185.585	185.531	185.497	182.372	174.862	162.678
.15779E+09	184.527	184.475	184.442	181.400	174.068	162.171
.18935E+09	183.228	183.177	183.144	180.191	173.041	161.435
.22090E+09	182.050	182.000	181.968	179.091	172.099	160.746
.25246E+09	181.008	180.959	180.929	178.122	171.278	160.162
.28402E+09	179.402	179.354	179.324	176.590	169.882	158.977
.31558E+09	178.139	178.092	178.063	175.388	168.794	158.068
.63115E+09	165.929	165.891	165.867	163.739	158.225	149.194
.94673E+09	155.293	155.260	155.241	153.512	148.809	141.077
.12623E+10	145.625	145.597	145.581	144.144	140.070	133.342
.15779E+10	137.487	137.463	137.449	136.241	132.691	126.805
.18935E+10	130.872	130.852	130.839	129.806	126.671	121.454
.22090E+10	125.354	125.336	125.325	124.429	121.633	116.966

.25246E+10	120.354	120.338	120.328	119.544	117.025	112.809
.28402E+10	116.486	116.471	116.462	115.763	113.464	109.604
.31558E+10	113.069	113.055	113.048	112.422	110.321	106.785
.63115E+10	96.4079	96.4001	96.3956	96.0667	94.8349	92.7439
.94673E+10	89.9630	89.9571	89.9537	89.7149	88.7790	87.1839
.12623E+11	86.2666	86.2618	86.2590	86.0686	85.2999	83.9865
.15779E+11	83.6728	83.6687	83.6664	83.5055	82.8452	81.7157
.18935E+11	81.3223	81.3187	81.3167	81.1793	80.6031	79.6157
.22090E+11	79.3806	79.3775	79.3757	79.2558	78.7434	77.8639
.25246E+11	77.6826	77.6798	77.6782	77.5727	77.1144	76.3267
.28402E+11	76.2231	76.2206	76.2191	76.1251	75.7101	74.9959
.31558E+11	74.9839	74.9816	74.9803	74.8953	74.5156	73.8615

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4811	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.772	104.657	72.1083	71.0550	68.8241
.31.558	104.772	104.657	72.1082	71.0550	68.8241
.31558E+07	127.772	127.655	97.9127	96.8153	94.5389
.63116E+07	131.655	131.538	102.326	101.227	98.9546
.94673E+07	133.797	133.681	104.842	103.746	101.490
.12623E+08	135.274	135.158	106.614	105.522	103.281
.15779E+08	136.382	136.266	107.972	106.884	104.656
.18935E+08	137.248	137.133	109.059	107.975	105.760
.22090E+08	137.958	137.844	109.969	108.889	106.685
.25246E+08	138.553	138.439	110.748	109.671	107.479
.28402E+08	139.055	138.942	111.422	110.349	108.168
.31558E+08	139.489	139.375	112.017	110.949	108.778
.63115E+08	141.835	141.725	115.606	114.574	112.488
.94673E+08	142.603	142.497	117.311	116.310	114.295
.12623E+09	142.800	142.697	118.279	117.306	115.350
.15779E+09	142.777	142.676	118.900	117.952	116.047
.18935E+09	142.533	142.435	119.298	118.375	116.521
.22090E+09	142.268	142.172	119.583	118.683	116.873
.25246E+09	142.083	141.989	119.916	119.036	117.267
.28402E+09	141.250	141.158	119.515	118.655	116.924
.31558E+09	140.640	140.550	119.275	118.431	116.731
.63115E+09	134.598	134.524	116.716	116.024	114.617
.94673E+09	128.623	128.560	113.339	112.760	111.572
.12623E+10	122.521	122.468	109.204	108.712	107.689
.15779E+10	117.351	117.306	105.692	105.269	104.382
.18935E+10	113.083	113.043	102.743	102.374	101.593
.22090E+10	109.484	109.448	100.227	99.9016	99.2076
.25246E+10	106.050	106.019	97.6775	97.3871	96.7661
.28402E+10	103.420	103.392	95.7525	95.4894	94.9254
.31558E+10	101.124	101.098	94.0988	93.8601	93.3468
.63115E+10	89.4095	89.3948	85.2497	85.1160	84.8223
.94673E+10	84.6420	84.6309	81.4622	81.3625	81.1409
.12623E+11	81.8943	81.8853	79.2734	79.1922	79.0110
.15779E+11	79.9168	79.9091	77.6596	77.5905	77.4350
.18935E+11	78.0433	78.0366	76.0683	76.0082	75.8731
.22090E+11	76.4634	76.4575	74.7025	74.6495	74.5296
.25246E+11	75.0722	75.0669	73.4936	73.4463	73.3394
.28402E+11	73.8586	73.8538	72.4262	72.3837	72.2868
.31558E+11	72.8198	72.8155	71.5071	71.4682	71.3798

Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64537.980 TIME= 06:24:14
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180
 VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180
 VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180
 VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180
 VARIABLE 7 IS AT NODE 71 ITEM= TEMP COMP= NAME= h02o180
 VARIABLE 8 IS AT NODE 22 ITEM= TEMP COMP= NAME= s02o180
 VARIABLE 9 IS AT NODE 120 ITEM= TEMP COMP= NAME= t02o180
 VARIABLE 10 IS AT NODE 161 ITEM= TEMP COMP= NAME= s10i180
 VARIABLE 11 IS AT NODE 252 ITEM= TEMP COMP= NAME= h10i180
 VARIABLE 12 IS AT NODE 266 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 280 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 209 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 201 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 306 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 397 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 411 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 425 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 354 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 346 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 451 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 542 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 556 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 570 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 499 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 491 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 3991 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3981 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4617 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2 NSOL	3802 TEMP	ts2i180	75.69	.3156E+11	207.5	.3156E+08
3 NSOL	87 TEMP	t02i180	75.69	.3156E+11	207.5	.3156E+08
4 NSOL	6 TEMP	s02i180	75.69	.3156E+11	207.6	.3156E+08

5 NSOL	43 TEMP	h02i180	76.61	.3156E+11	222.8	.3156E+08
6 NSOL	57 TEMP	c02i180	77.08	.3156E+11	230.7	.3156E+08
7 NSOL	71 TEMP	h02o180	77.23	.3156E+11	233.3	.3156E+08
8 NSOL	22 TEMP	s02o180	77.02	.3156E+11	230.8	.3156E+08
9 NSOL	120 TEMP	t02o180	77.02	.3156E+11	230.8	.3156E+08
10 NSOL	161 TEMP	s10i180	77.02	.3156E+11	230.8	.3156E+08
11 NSOL	252 TEMP	h10i180	77.39	.3156E+11	235.4	.3156E+08
12 NSOL	266 TEMP	c10i180	77.43	.3156E+11	235.2	.3156E+08
13 NSOL	280 TEMP	h10o180	77.19	.3156E+11	230.7	.3156E+08
14 NSOL	209 TEMP	s10o180	76.62	.3156E+11	221.3	.3156E+08
15 NSOL	201 TEMP	t10o180	76.62	.3156E+11	221.2	.3156E+08
16 NSOL	306 TEMP	s16i180	76.62	.3156E+11	221.2	.3156E+08
17 NSOL	397 TEMP	h16i180	76.66	.3156E+11	219.8	.3156E+08
18 NSOL	411 TEMP	c16i180	76.39	.3156E+11	213.4	.3156E+08
19 NSOL	425 TEMP	h16o180	75.83	.3156E+11	202.7	.6312E+08
20 NSOL	354 TEMP	s16o180	74.96	.3156E+11	187.0	.6312E+08
21 NSOL	346 TEMP	t16o180	74.96	.3156E+11	186.9	.6312E+08
22 NSOL	451 TEMP	s22i180	74.95	.3156E+11	186.9	.6312E+08
23 NSOL	542 TEMP	h22i180	74.87	.3156E+11	183.5	.6312E+08
24 NSOL	556 TEMP	c22i180	74.49	.3156E+11	175.6	.6312E+08
25 NSOL	570 TEMP	h22o180	73.84	.3156E+11	162.8	.9467E+08
26 NSOL	499 TEMP	s22o180	66.48	.1000E-05	142.5	.1262E+09
27 NSOL	491 TEMP	t22o180	66.37	.1000E-05	142.4	.1262E+09
28 NSOL	3991 TEMP	i22i180	29.31	.1000E-05	119.6	.2525E+09
29 NSOL	3981 TEMP	i22o180	28.35	.1000E-05	118.8	.2525E+09
30 NSOL	4617 TEMP	o22o180	26.14	.1000E-05	117.0	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.700
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.521	176.532	176.634	194.045	203.078	206.129
31.558	176.521	176.532	176.635	194.045	203.077	206.129
.31558E+07	198.486	198.497	198.596	214.746	223.119	225.950
.63116E+07	202.067	202.078	202.176	218.105	226.374	229.169
.94673E+07	203.868	203.878	203.976	219.749	227.942	230.711
.12623E+08	205.019	205.030	205.127	220.777	228.909	231.659
.15779E+08	205.818	205.829	205.926	221.473	229.554	232.285
.18935E+08	206.384	206.395	206.491	221.947	229.982	232.699
.22090E+08	206.803	206.814	206.910	222.284	230.278	232.980
.25246E+08	207.114	207.124	207.219	222.518	230.474	233.163
.28402E+08	207.338	207.349	207.443	222.672	230.592	233.268
.31558E+08	207.498	207.509	207.603	222.765	230.651	233.316
.63115E+08	207.485	207.495	207.586	222.229	229.850	232.421
.94673E+08	206.238	206.248	206.336	220.583	228.000	230.499
.12623E+09	204.667	204.677	204.763	218.679	225.926	228.363
.15779E+09	203.122	203.131	203.215	216.852	223.954	226.340
.18935E+09	201.312	201.321	201.403	214.757	221.713	224.046
.22090E+09	199.691	199.700	199.780	212.889	219.717	222.005
.25246E+09	198.239	198.248	198.326	211.202	217.909	220.154
.28402E+09	196.227	196.236	196.312	208.991	215.596	217.803
.31558E+09	194.628	194.636	194.711	207.218	213.735	215.911
.63115E+09	179.312	179.319	179.382	190.169	195.811	197.682
.94673E+09	166.364	166.370	166.424	175.859	180.794	182.417
.12623E+10	154.952	154.957	155.003	163.371	167.744	169.166
.15779E+10	145.427	145.431	145.471	152.908	156.794	158.044
.18935E+10	137.749	137.753	137.788	144.454	147.942	149.058
.22090E+10	131.385	131.389	131.420	137.439	140.590	141.594
.25246E+10	125.703	125.706	125.734	131.219	134.091	135.003

.28402E+10	121.308	121.311	121.337	126.392	129.038	129.876
.31558E+10	117.427	117.429	117.453	122.111	124.550	125.319
.63115E+10	98.8198	98.8212	98.8350	101.673	103.159	103.620
.94673E+10	91.7659	91.7670	91.7775	93.9628	95.1086	95.4619
.12623E+11	87.7336	87.7344	87.7430	89.5517	90.4997	90.7906
.15779E+11	84.9250	84.9257	84.9331	86.4930	87.3105	87.5605
.18935E+11	82.4084	82.4090	82.4155	83.7835	84.5003	84.7189
.22090E+11	80.3415	80.3421	80.3478	81.5698	82.2099	82.4045
.25246E+11	78.5380	78.5385	78.5436	79.6407	80.2152	80.3895
.28402E+11	76.9944	76.9949	76.9995	77.9962	78.5180	78.6759
.31558E+11	75.6869	75.6874	75.6916	76.6058	77.0845	77.2290

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.710
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP s02o180	120 TEMP t02o180	161 TEMP s10i180	252 TEMP h10i180	266 TEMP c10i180	280 TEMP h10o180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.233	203.231	203.246	208.854	208.921	204.152
31.558	203.233	203.231	203.246	208.854	208.921	204.151
.31558E+07	223.290	223.288	223.302	228.255	228.102	223.468
.63116E+07	226.544	226.542	226.555	231.412	231.229	226.620
.94673E+07	228.110	228.107	228.121	232.915	232.717	228.131
.12623E+08	229.076	229.074	229.087	233.834	233.625	229.062
.15779E+08	229.718	229.716	229.729	234.438	234.222	229.679
.18935E+08	230.145	230.143	230.156	234.832	234.612	230.088
.22090E+08	230.439	230.436	230.449	235.098	234.874	230.367
.25246E+08	230.632	230.630	230.643	235.266	235.040	230.550
.28402E+08	230.747	230.745	230.758	235.358	235.130	230.657
.31558E+08	230.805	230.802	230.815	235.394	235.165	230.708
.63115E+08	229.983	229.981	229.993	234.420	234.192	229.873
.94673E+08	228.115	228.112	228.124	232.445	232.228	228.025
.12623E+09	226.024	226.021	226.033	230.270	230.067	225.963
.15779E+09	224.037	224.035	224.046	228.214	228.024	224.007
.18935E+09	221.781	221.779	221.790	225.889	225.713	221.785
.22090E+09	219.773	219.770	219.781	223.821	223.658	219.806
.25246E+09	217.953	217.950	217.961	221.943	221.790	218.011
.28402E+09	215.626	215.624	215.635	219.574	219.436	215.723
.31558E+09	213.757	213.754	213.765	217.666	217.540	213.883
.63115E+09	195.765	195.763	195.772	199.264	199.229	196.111
.94673E+09	180.697	180.696	180.703	183.848	183.875	181.182
.12623E+10	167.595	167.594	167.601	170.471	170.544	168.184
.15779E+10	156.611	156.610	156.616	159.227	159.327	157.249
.18935E+10	147.751	147.750	147.756	150.137	150.250	148.397
.22090E+10	140.401	140.400	140.405	142.582	142.701	141.038
.25246E+10	133.904	133.903	133.908	135.914	136.037	134.530
.28402E+10	128.855	128.854	128.858	130.724	130.848	129.465
.31558E+10	124.371	124.370	124.374	126.107	126.229	124.960
.63115E+10	103.019	103.018	103.021	104.118	104.218	103.457
.94673E+10	94.9916	94.9912	94.9930	95.8496	95.9324	95.3480
.12623E+11	90.3973	90.3970	90.3985	91.1130	91.1844	90.7017
.15779E+11	87.2194	87.2192	87.2205	87.8394	87.9025	87.4867
.18935E+11	84.4179	84.4177	84.4188	84.9643	85.0210	84.6570
.22090E+11	82.1341	82.1339	82.1349	82.6242	82.6760	82.3513
.25246E+11	80.1456	80.1455	80.1463	80.5871	80.6345	80.3434
.28402E+11	78.4535	78.4533	78.4541	78.8558	78.8996	78.6353
.31558E+11	77.0243	77.0242	77.0249	77.3943	77.4349	77.1928

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.720

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.626	193.589	193.571	192.668	186.098	174.363
31.558	193.627	193.590	193.571	192.668	186.097	174.363
.31558E+07	213.521	213.484	213.464	212.147	205.591	194.239
.63116E+07	216.771	216.733	216.713	215.345	208.807	197.538
.94673E+07	218.358	218.321	218.301	216.908	210.396	199.199
.12623E+08	219.350	219.313	219.293	217.886	211.398	200.265
.15779E+08	220.021	219.984	219.964	218.548	212.084	201.008
.18935E+08	220.478	220.441	220.421	219.000	212.561	201.537
.22090E+08	220.802	220.765	220.745	219.321	212.906	201.931
.25246E+08	221.027	220.990	220.970	219.546	213.154	202.225
.28402E+08	221.173	221.137	221.117	219.693	213.324	202.440
.31558E+08	221.262	221.226	221.206	219.783	213.437	202.596
.63115E+08	220.730	220.695	220.676	219.289	213.143	202.660
.94673E+08	219.122	219.088	219.070	217.732	211.759	201.570
.12623E+09	217.265	217.232	217.214	215.927	210.108	200.170
.15779E+09	215.483	215.450	215.433	214.192	208.505	198.785
.18935E+09	213.438	213.407	213.390	212.198	206.648	197.150
.22090E+09	211.613	211.583	211.566	210.417	204.987	195.683
.25246E+09	209.964	209.934	209.918	208.808	203.489	194.369
.28402E+09	207.804	207.775	207.759	206.693	201.477	192.525
.31558E+09	206.073	206.044	206.028	204.997	199.870	191.059
.63115E+09	189.386	189.362	189.350	188.626	184.349	176.900
.94673E+09	175.308	175.288	175.278	174.789	171.167	164.766
.12623E+10	162.980	162.963	162.955	162.641	159.525	153.936
.15779E+10	152.623	152.608	152.602	152.405	149.699	144.792
.18935E+10	144.254	144.241	144.235	144.111	141.729	137.373
.22090E+10	137.300	137.288	137.283	137.211	135.092	131.190
.25246E+10	131.126	131.116	131.111	131.079	129.176	125.645
.28402E+10	126.329	126.320	126.316	126.310	124.577	121.341
.31558E+10	122.071	122.063	122.059	122.074	120.493	117.526
.63115E+10	101.697	101.693	101.691	101.759	100.842	99.0751
.94673E+10	93.9907	93.9871	93.9856	94.0527	93.3568	92.0057
.12623E+11	89.5771	89.5741	89.5729	89.6362	89.0657	87.9520
.15779E+11	86.5164	86.5138	86.5128	86.5712	86.0821	85.1238
.18935E+11	83.8055	83.8033	83.8025	83.8575	83.4314	82.5931
.22090E+11	81.5904	81.5885	81.5877	81.6398	81.2613	80.5143
.25246E+11	79.6600	79.6583	79.6576	79.7067	79.3685	78.6992
.28402E+11	78.0144	78.0128	78.0122	78.0585	77.7527	77.1456
.31558E+11	76.6229	76.6215	76.6210	76.6649	76.3852	75.8291

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.740
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0556
.20000E-05	156.260	156.199	156.162	153.011	144.143	129.320
31.558	156.260	156.199	156.162	153.011	144.143	129.320
.31558E+07	177.083	177.022	176.983	173.554	164.942	150.785

.63116E+07	180.551	180.490	180.451	176.992	168.436	154.419
.94673E+07	182.344	182.283	182.245	178.777	170.271	156.364
.12623E+08	183.519	183.459	183.420	179.952	171.490	157.676
.15779E+08	184.357	184.297	184.259	180.794	172.374	158.640
.18935E+08	184.973	184.913	184.875	181.417	173.035	159.376
.22090E+08	185.448	185.388	185.350	181.899	173.555	159.966
.25246E+08	185.818	185.759	185.721	182.279	173.971	160.447
.28402E+08	186.106	186.046	186.009	182.576	174.303	160.841
.31558E+08	186.331	186.272	186.235	182.812	174.572	161.170
.63115E+08	186.961	186.904	186.867	183.549	175.595	162.681
.94673E+08	186.324	186.269	186.234	183.017	175.301	162.781
.12623E+09	185.313	185.260	185.226	182.103	174.594	162.411
.15779E+09	184.259	184.206	184.173	181.134	173.803	161.907
.18935E+09	182.962	182.911	182.879	179.928	172.779	161.174
.22090E+09	181.787	181.737	181.706	178.831	171.840	160.488
.25246E+09	180.748	180.699	180.668	177.864	171.021	159.907
.28402E+09	179.147	179.099	179.069	176.337	169.630	158.727
.31558E+09	177.888	177.841	177.811	175.139	168.547	157.822
.63115E+09	165.708	165.669	165.645	163.520	158.008	148.979
.94673E+09	155.095	155.063	155.043	153.317	148.616	140.886
.12623E+10	145.450	145.423	145.406	143.971	139.899	133.174
.15779E+10	137.329	137.306	137.291	136.085	132.538	126.655
.18935E+10	130.729	130.708	130.696	129.664	126.531	121.317
.22090E+10	125.221	125.203	125.192	124.298	121.504	116.840
.25246E+10	120.232	120.216	120.206	119.424	116.907	112.693
.28402E+10	116.372	116.357	116.348	115.651	113.353	109.496
.31558E+10	112.962	112.948	112.940	112.316	110.217	106.684
.63115E+10	96.3383	96.3305	96.3260	95.9980	94.7677	92.6788
.94673E+10	89.9070	89.9011	89.8977	89.6597	88.7250	87.1317
.12623E+11	86.2189	86.2141	86.2113	86.0215	85.2539	83.9421
.15779E+11	83.6309	83.6268	83.6245	83.4642	82.8049	81.6767
.18935E+11	81.2857	81.2821	81.2801	81.1432	80.5679	79.5817
.22090E+11	79.3478	79.3446	79.3429	79.2234	78.7119	77.8335
.25246E+11	77.6529	77.6501	77.6485	77.5434	77.0859	76.2991
.28402E+11	76.1959	76.1933	76.1919	76.0982	75.6839	74.9706
.31558E+11	74.9585	74.9561	74.9548	74.8702	74.4911	73.8379

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.750
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years.

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP	491 TEMP	3991 TEMP	3981 TEMP	4617 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4812	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.765	104.650	72.1003	71.0470	68.8177
31.558	104.765	104.650	72.1002	71.0470	68.8177
.31558E+07	127.490	127.374	97.5976	96.5002	94.2865
.63116E+07	131.368	131.252	102.007	100.908	98.6986
.94673E+07	133.510	133.394	104.523	103.428	101.234
.12623E+08	134.987	134.871	106.296	105.204	103.025
.15779E+08	136.095	135.980	107.655	106.567	104.401
.18935E+08	136.962	136.847	108.743	107.658	105.505
.22090E+08	137.673	137.558	109.653	108.573	106.431
.25246E+08	138.268	138.154	110.433	109.357	107.226
.28402E+08	138.771	138.657	111.108	110.036	107.916
.31558E+08	139.205	139.091	111.704	110.636	108.526
.63115E+08	141.556	141.447	115.301	114.268	112.243
.94673E+08	142.329	142.223	117.012	116.011	114.055
.12623E+09	142.530	142.427	117.986	117.013	115.115
.15779E+09	142.511	142.411	118.612	117.664	115.815
.18935E+09	142.271	142.173	119.014	118.092	116.293
.22090E+09	142.009	141.914	119.304	118.404	116.649
.25246E+09	141.827	141.733	119.641	118.761	117.046

.28402E+09	141.000	140.908	119.247	118.387	116.708
.31558E+09	140.394	140.304	119.011	118.167	116.520
.63115E+09	134.385	134.311	116.491	115.799	114.436
.94673E+09	128.435	128.373	113.143	112.564	111.415
.12623E+10	122.357	122.304	109.034	108.541	107.552
.15779E+10	117.204	117.158	105.540	105.117	104.260
.18935E+10	112.950	112.910	102.606	102.237	101.483
.22090E+10	109.361	109.326	100.102	99.7766	99.1075
.25246E+10	105.938	105.907	97.5636	97.2732	96.6749
.28402E+10	103.316	103.287	95.6467	95.3837	94.8406
.31558E+10	101.026	101.000	93.9998	93.7611	93.2674
.63115E+10	89.3468	89.3321	85.1870	85.0534	84.7722
.94673E+10	84.5918	84.5808	81.4122	81.3126	81.1008
.12623E+11	81.8517	81.8427	79.2310	79.1498	78.9770
.15779E+11	79.8794	79.8717	77.6225	77.5533	77.4053
.18935E+11	78.0107	78.0040	76.0359	75.9758	75.8472
.22090E+11	76.4342	76.4283	74.6735	74.6205	74.5063
.25246E+11	75.0458	75.0405	73.4674	73.4201	73.3184
.28402E+11	73.8343	73.8295	72.4021	72.3596	72.2676
.31558E+11	72.7971	72.7928	71.4846	71.4457	71.3618

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 64541.900 TIME= 06:24:18
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135
 VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135
 VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135
 VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135
 VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135
 VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135
 VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135
 VARIABLE 10 IS AT NODE 1607 ITEM= TEMP COMP= NAME= s12i135
 VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135
 VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135
 VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135
 VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135
 VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135
 VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135
 VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135
 VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135
 VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135
 VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135
 VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135
 VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= i20o135

VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135

VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3526 TEMP	ts2i135	75.71	.3156E+11	208.0	.3156E+08
3	NSOL	82 TEMP	t02i135	75.71	.3156E+11	208.0	.3156E+08
4	NSOL	1 TEMP	s02i135	75.71	.3156E+11	208.0	.3156E+08
5	NSOL	41 TEMP	h02i135	76.33	.3156E+11	218.2	.3156E+08
6	NSOL	57 TEMP	c02i135	77.08	.3156E+11	230.7	.3156E+08
7	NSOL	73 TEMP	h02o135	77.49	.3156E+11	237.9	.3156E+08
8	NSOL	10 TEMP	s02o135	77.65	.3156E+11	240.9	.3156E+08
9	NSOL	116 TEMP	t02o135	77.67	.3156E+11	241.2	.3156E+08
10	NSOL	1607 TEMP	s12i135	77.68	.3156E+11	241.5	.3156E+08
11	NSOL	1700 TEMP	h12i135	78.20	.3156E+11	248.0	.2840E+08
12	NSOL	1716 TEMP	c12i135	78.31	.3156E+11	247.8	.2840E+08
13	NSOL	1732 TEMP	h12o135	77.79	.3156E+11	238.1	.3156E+08
14	NSOL	1655 TEMP	s12o135	76.86	.3156E+11	221.2	.3156E+08
15	NSOL	1647 TEMP	t12o135	76.83	.3156E+11	220.5	.3156E+08
16	NSOL	2477 TEMP	s20i135	76.79	.3156E+11	219.7	.3156E+08
17	NSOL	2570 TEMP	h20i135	76.14	.3156E+11	205.5	.3156E+08
18	NSOL	2586 TEMP	c20i135	75.05	.3156E+11	184.3	.6312E+08
19	NSOL	2602 TEMP	h20o135	73.39	.3156E+11	153.3	.9467E+08
20	NSOL	2525 TEMP	s20o135	35.53	.1000E-05	122.6	.2525E+09
21	NSOL	2517 TEMP	t20o135	34.03	.1000E-05	121.7	.2525E+09
22	NSOL	3956 TEMP	i20o135	29.45	.1000E-05	118.8	.2525E+09
23	NSOL	4591 TEMP	o20o135	26.14	.1000E-05	116.6	.2525E+09
24	NSOL	2441 TEMP	c14i135	76.69	.3156E+11	215.6	.3156E+08
25	NSOL	1861 TEMP	c18i135	76.67	.3156E+11	215.4	.3156E+08
26	NSOL	499 TEMP	s22o180	66.48	.1000E-05	142.5	.1262E+09
27	NSOL	491 TEMP	t22o180	66.37	.1000E-05	142.4	.1262E+09
28	NSOL	3991 TEMP	i22i180	29.31	.1000E-05	119.6	.2525E+09
29	NSOL	3981 TEMP	i22o180	28.35	.1000E-05	118.8	.2525E+09
30	NSOL	4617 TEMP	o22o180	26.14	.1000E-05	117.0	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64544.980
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts2i135	82 TEMP t02i135	1 TEMP s02i135	41 TEMP h02i135	57 TEMP c02i135	73 TEMP h02o135
.10000E-05	139.403	139.403	139.409	152.795	168.730	177.938
.20000E-05	176.866	176.866	176.872	188.754	203.078	211.438
31.558	176.866	176.866	176.872	188.754	203.077	211.437
.31558E+07	198.961	198.952	198.954	209.903	223.119	230.823
.63116E+07	202.543	202.534	202.537	213.329	226.374	233.979
.94673E+07	204.342	204.333	204.336	215.021	227.942	235.477
.12623E+08	205.492	205.483	205.486	216.086	228.909	236.388
.15779E+08	206.290	206.281	206.283	216.813	229.554	236.985
.18935E+08	206.854	206.845	206.847	217.314	229.982	237.371
.22090E+08	207.272	207.262	207.265	217.676	230.278	237.628
.25246E+08	207.580	207.571	207.574	217.933	230.474	237.788
.28402E+08	207.803	207.794	207.796	218.107	230.592	237.872
.31558E+08	207.962	207.953	207.955	218.220	230.651	237.899

.63115E+08	207.934	207.925	207.928	217.840	229.850	236.846
.94673E+08	206.675	206.666	206.668	216.312	228.000	234.801
.12623E+09	205.094	205.085	205.087	214.507	225.926	232.563
.15779E+09	203.539	203.531	203.533	212.764	223.954	230.452
.18935E+09	201.720	201.711	201.713	210.754	221.713	228.070
.22090E+09	200.090	200.082	200.084	208.959	219.717	225.953
.25246E+09	198.631	198.622	198.624	207.342	217.909	224.030
.28402E+09	196.610	196.602	196.604	205.189	215.596	221.617
.31558E+09	195.004	194.996	194.997	203.466	213.735	219.673
.63115E+09	179.627	179.620	179.622	186.927	195.811	200.930
.94673E+09	166.633	166.627	166.628	173.022	180.794	185.250
.12623E+10	155.183	155.178	155.179	160.855	167.744	171.665
.15779E+10	145.629	145.624	145.625	150.672	156.794	160.253
.18935E+10	137.929	137.924	137.925	142.449	147.942	151.035
.22090E+10	131.546	131.543	131.543	135.629	140.590	143.377
.25246E+10	125.848	125.845	125.845	129.569	134.091	136.625
.28402E+10	121.442	121.439	121.439	124.871	129.038	131.369
.31558E+10	117.550	117.547	117.547	120.710	124.550	126.693
.63115E+10	98.8937	98.8917	98.8918	100.820	103.159	104.451
.94673E+10	91.8234	91.8217	91.8218	93.3062	95.1086	96.1004
.12623E+11	87.7814	87.7800	87.7800	89.0086	90.4997	91.3176
.15779E+11	84.9665	84.9653	84.9653	86.0248	87.3105	88.0142
.18935E+11	82.4446	82.4435	82.4435	83.3731	84.5003	85.1162
.22090E+11	80.3739	80.3729	80.3729	81.2032	82.2099	82.7587
.25246E+11	78.5670	78.5662	78.5662	79.3117	80.2152	80.7071
.28402E+11	77.0209	77.0201	77.0201	77.6974	78.5180	78.9640
.31558E+11	75.7113	75.7106	75.7106	76.3319	77.0845	77.4930

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64544.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.225	182.618	182.986	192.562	194.134	184.165
.20000E-05	215.143	215.477	215.789	223.808	224.406	214.424
31.558	215.143	215.477	215.789	223.807	224.405	214.423
.31558E+07	234.107	234.403	234.678	241.709	241.703	231.767
.63116E+07	237.201	237.492	237.762	244.658	244.577	234.652
.94673E+07	238.656	238.943	239.210	246.015	245.892	236.001
.12623E+08	239.536	239.820	240.084	246.821	246.669	236.812
.15779E+08	240.106	240.388	240.649	247.331	247.159	237.336
.18935E+08	240.470	240.750	241.009	247.644	247.457	237.667
.22090E+08	240.706	240.984	241.242	247.836	247.638	237.879
.25246E+08	240.847	241.124	241.381	247.938	247.730	238.004
.28402E+08	240.914	241.189	241.444	247.968	247.753	238.058
.31558E+08	240.925	241.199	241.453	247.945	247.725	238.061
.63115E+08	239.748	240.012	240.256	246.524	246.288	236.897
.94673E+08	237.611	237.868	238.105	244.218	243.992	234.839
.12623E+09	235.298	235.548	235.781	241.769	241.562	232.619
.15779E+09	233.125	233.371	233.598	239.484	239.296	230.535
.18935E+09	230.681	230.922	231.146	236.929	236.763	228.191
.22090E+09	228.511	228.748	228.967	234.663	234.517	226.109
.25246E+09	226.536	226.769	226.985	232.596	232.466	224.213
.28402E+09	224.083	224.313	224.526	230.074	229.971	221.864
.31558E+09	222.103	222.330	222.541	228.034	227.952	219.966
.63115E+09	203.013	203.213	203.398	208.311	208.399	201.585
.94673E+09	187.061	187.238	187.403	191.825	192.020	186.128
.12623E+10	173.254	173.413	173.561	177.579	177.852	172.698
.15779E+10	161.643	161.785	161.918	165.563	165.883	161.352
.18935E+10	152.267	152.396	152.516	155.844	156.191	152.157
.22090E+10	144.485	144.601	144.710	147.759	148.113	144.490

.25246E+10	137.631	137.738	137.838	140.648	141.004	137.725
.28402E+10	132.293	132.392	132.485	135.097	135.449	132.444
.31558E+10	127.542	127.634	127.719	130.145	130.489	127.732
.63115E+10	104.957	105.013	105.067	106.601	106.870	105.224
.94673E+10	96.4860	96.5299	96.5712	97.7699	97.9922	96.7299
.12623E+11	91.6341	91.6705	91.7048	92.7040	92.8948	91.8538
.15779E+11	88.2860	88.3174	88.3470	89.2122	89.3808	88.4850
.18935E+11	85.3531	85.3807	85.4067	86.1691	86.3207	85.5374
.22090E+11	82.9693	82.9940	83.0173	83.7007	83.8390	83.1411
.25246E+11	80.8953	80.9174	80.9383	81.5539	81.6802	81.0551
.28402E+11	79.1344	79.1545	79.1735	79.7342	79.8507	79.2838
.31558E+11	77.6486	77.6671	77.6846	78.2001	78.3082	77.7889

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64545.010
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	165.513	164.687	163.835	149.017	123.959	83.2196
.20000E-05	196.414	195.602	194.764	179.952	156.158	119.173
31.558	196.415	195.602	194.764	179.952	156.158	119.173
.31558E+07	214.277	213.479	212.656	197.984	175.045	140.278
.63116E+07	217.255	216.461	215.641	201.027	178.263	143.937
.94673E+07	218.699	217.909	217.093	202.549	179.935	145.936
.12623E+08	219.595	218.808	217.996	203.516	181.032	147.299
.15779E+08	220.195	219.411	218.603	204.183	181.816	148.311
.18935E+08	220.598	219.818	219.013	204.651	182.393	149.093
.22090E+08	220.879	220.101	219.300	204.994	182.838	149.727
.25246E+08	221.068	220.294	219.495	205.244	183.186	150.251
.28402E+08	221.185	220.414	219.618	205.420	183.456	150.687
.31558E+08	221.249	220.481	219.688	205.542	183.669	151.057
.63115E+08	220.600	219.855	219.088	205.391	184.268	152.912
.94673E+08	218.968	218.244	217.497	204.184	183.674	153.300
.12623E+09	217.119	216.412	215.684	202.707	182.727	153.180
.15779E+09	215.354	214.663	213.951	201.264	181.738	152.891
.18935E+09	213.339	212.664	211.968	199.580	180.519	152.380
.22090E+09	211.542	210.880	210.199	198.072	179.414	151.885
.25246E+09	209.914	209.266	208.598	196.715	178.436	151.483
.28402E+09	207.809	207.173	206.517	194.864	176.926	150.472
.31558E+09	206.119	205.493	204.848	193.387	175.738	149.708
.63115E+09	189.746	189.218	188.673	179.060	164.167	142.192
.94673E+09	175.878	175.425	174.957	166.771	153.988	135.113
.12623E+10	163.703	163.309	162.903	155.827	144.670	128.190
.15779E+10	153.424	153.080	152.725	146.565	136.791	122.326
.18935E+10	145.088	144.783	144.470	139.033	130.360	117.505
.22090E+10	138.138	137.866	137.586	132.740	124.975	113.447
.25246E+10	131.967	131.721	131.468	127.107	120.086	109.646
.28402E+10	127.158	126.933	126.702	122.722	116.293	106.719
.31558E+10	122.877	122.671	122.459	118.824	112.933	104.149
.63115E+10	102.310	102.188	102.063	99.9412	96.4437	91.2081
.94673E+10	94.4939	94.4013	94.3062	92.6954	90.0261	86.0196
.12623E+11	90.0078	89.9316	89.8534	88.5329	86.3351	83.0306
.15779E+11	86.8959	86.8305	86.7633	85.6305	83.7405	80.8951
.18935E+11	84.1465	84.0895	84.0308	83.0438	81.3920	78.9016
.22090E+11	81.9011	81.8503	81.7981	80.9214	79.4506	77.2300
.25246E+11	79.9435	79.8980	79.8513	79.0681	77.7509	75.7600
.28402E+11	78.2753	78.2342	78.1919	77.4832	76.2893	74.4829
.31558E+11	76.8648	76.8271	76.7884	76.1407	75.0474	73.3917

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64545.020
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP s20o135	2517 TEMP t20o135	3956 TEMP i20o135	4591 TEMP o20o135	2441 TEMP c14i135	1861 TEMP c18i135
.10000E-05	35.5294	34.0292	29.4547	26.1400	160.477	160.477
.20000E-05	77.2882	75.9766	71.8400	68.7948	190.812	190.805
31.558	77.2881	75.9765	71.8400	68.7948	190.812	190.804
.31558E+07	101.763	100.558	96.6866	93.7920	208.537	208.364
.63116E+07	106.056	104.872	101.064	98.1973	211.498	211.320
.94673E+07	108.502	107.333	103.568	100.732	212.947	212.769
.12623E+08	110.220	109.063	105.333	102.525	213.852	213.674
.15779E+08	111.534	110.386	106.686	103.902	214.464	214.286
.18935E+08	112.583	111.445	107.771	105.008	214.882	214.704
.22090E+08	113.460	112.329	108.680	105.935	215.179	215.001
.25246E+08	114.209	113.085	109.459	106.732	215.385	215.207
.28402E+08	114.855	113.739	110.134	107.423	215.519	215.342
.31558E+08	115.425	114.315	110.730	108.035	215.601	215.424
.63115E+08	118.828	117.767	114.340	111.765	215.122	214.948
.94673E+08	120.398	119.376	116.069	113.587	213.650	213.477
.12623E+09	121.259	120.269	117.062	114.657	211.946	211.775
.15779E+09	121.793	120.829	117.707	115.365	210.308	210.139
.18935E+09	122.104	121.166	118.128	115.851	208.425	208.258
.22090E+09	122.317	121.401	118.435	116.213	206.743	206.577
.25246E+09	122.579	121.684	118.787	116.617	205.222	205.058
.28402E+09	122.132	121.254	118.415	116.288	203.222	203.061
.31558E+09	121.849	120.986	118.197	116.107	201.617	201.458
.63115E+09	118.869	118.148	115.822	114.083	186.070	185.929
.94673E+09	115.181	114.566	112.585	111.105	172.850	172.724
.12623E+10	110.823	110.287	108.567	107.281	161.169	161.056
.15779E+10	107.113	106.644	105.141	104.018	151.275	151.173
.18935E+10	104.006	103.590	102.259	101.265	143.225	143.131
.22090E+10	101.358	100.985	99.7954	98.9071	136.508	136.421
.25246E+10	98.7041	98.3668	97.2914	96.4918	130.524	130.444
.28402E+10	96.6933	96.3843	95.3998	94.6701	125.860	125.785
.31558E+10	94.9590	94.6757	93.7740	93.1075	121.707	121.636
.63115E+10	85.7577	85.5898	85.0593	84.6696	101.676	101.629
.94673E+10	81.8489	81.7204	81.3156	81.0186	94.0262	93.9884
.12623E+11	79.5908	79.4847	79.1511	78.9069	89.6321	89.5998
.15779E+11	77.9323	77.8409	77.5540	77.3438	86.5777	86.5493
.18935E+11	76.3080	76.2279	75.9768	75.7932	83.8729	83.8479
.22090E+11	74.9166	74.8452	74.6216	74.4580	81.6609	81.6385
.25246E+11	73.6855	73.6214	73.4209	73.2745	79.7311	79.7108
.28402E+11	72.5998	72.5417	72.3600	72.2272	78.0851	78.0664
.31558E+11	71.6656	71.6123	71.4456	71.3241	76.6924	76.6749

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64545.160 TIME= 06:24:22
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 59 ITEM= TEMP COMP= NAME= h02o180
 VARIABLE 8 IS AT NODE 14 ITEM= TEMP COMP= NAME= s02o180
 VARIABLE 9 IS AT NODE 135 ITEM= TEMP COMP= NAME= t02o180
 VARIABLE 10 IS AT NODE 620 ITEM= TEMP COMP= NAME= s10i180
 VARIABLE 11 IS AT NODE 699 ITEM= TEMP COMP= NAME= h10i180
 VARIABLE 12 IS AT NODE 701 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 703 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 666 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 659 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 765 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 844 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 846 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 848 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 811 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 804 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 910 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 989 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 991 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 993 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 956 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 949 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4028 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3931 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4565 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts2i180	75.70	.3156E+11	207.6	.3156E+08
3	NSOL	104 TEMP	t02i180	75.70	.3156E+11	207.6	.3156E+08
4	NSOL	29 TEMP	s02i180	75.70	.3156E+11	207.7	.3156E+08
5	NSOL	55 TEMP	h02i180	76.61	.3156E+11	222.8	.3156E+08
6	NSOL	57 TEMP	c02i180	77.08	.3156E+11	230.7	.3156E+08
7	NSOL	59 TEMP	h02o180	77.22	.3156E+11	233.3	.3156E+08
8	NSOL	14 TEMP	s02o180	77.02	.3156E+11	230.7	.3156E+08
9	NSOL	135 TEMP	t02o180	77.02	.3156E+11	230.7	.3156E+08
10	NSOL	620 TEMP	s10i180	77.02	.3156E+11	230.7	.3156E+08
11	NSOL	699 TEMP	h10i180	77.38	.3156E+11	235.3	.3156E+08
12	NSOL	701 TEMP	c10i180	77.42	.3156E+11	235.0	.3156E+08
13	NSOL	703 TEMP	h10o180	77.17	.3156E+11	230.5	.3156E+08
14	NSOL	666 TEMP	s10o180	76.60	.3156E+11	221.0	.3156E+08
15	NSOL	659 TEMP	t10o180	76.60	.3156E+11	220.9	.3156E+08
16	NSOL	765 TEMP	s16i180	76.60	.3156E+11	220.9	.3156E+08
17	NSOL	844 TEMP	h16i180	76.64	.3156E+11	219.5	.3156E+08

18 NSOL	846 TEMP	c16i180	76.35	.3156E+11	213.1	.3156E+08
19 NSOL	848 TEMP	h16o180	75.79	.3156E+11	202.2	.6312E+08
20 NSOL	811 TEMP	s16o180	74.92	.3156E+11	186.5	.6312E+08
21 NSOL	804 TEMP	t16o180	74.91	.3156E+11	186.4	.6312E+08
22 NSOL	910 TEMP	s22i180	74.91	.3156E+11	186.4	.6312E+08
23 NSOL	989 TEMP	h22i180	74.82	.3156E+11	183.0	.6312E+08
24 NSOL	991 TEMP	c22i180	74.44	.3156E+11	175.0	.6312E+08
25 NSOL	993 TEMP	h22o180	73.78	.3156E+11	162.2	.9467E+08
26 NSOL	956 TEMP	s22o180	66.48	.1000E-05	141.8	.1262E+09
27 NSOL	949 TEMP	t22o180	66.37	.1000E-05	141.7	.1262E+09
28 NSOL	4028 TEMP	i22i180	29.31	.1000E-05	118.8	.2525E+09
29 NSOL	3931 TEMP	i22o180	28.35	.1000E-05	117.9	.2525E+09
30 NSOL	4565 TEMP	j22o180	26.14	.1000E-05	116.2	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.890
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.526	176.537	176.639	194.047	203.078	206.127
31.558	176.526	176.537	176.639	194.047	203.077	206.127
.31558E+07	198.600	198.610	198.709	214.798	223.119	225.900
.63116E+07	202.183	202.193	202.291	218.158	226.374	229.118
.94673E+07	203.983	203.994	204.091	219.803	227.942	230.661
.12623E+08	205.134	205.145	205.242	220.831	228.909	231.608
.15779E+08	205.933	205.944	206.040	221.526	229.554	232.235
.18935E+08	206.499	206.509	206.605	222.001	229.982	232.648
.22090E+08	206.918	206.928	207.024	222.337	230.278	232.930
.25246E+08	207.228	207.238	207.333	222.571	230.474	233.113
.28402E+08	207.452	207.463	207.557	222.725	230.592	233.218
.31558E+08	207.612	207.622	207.717	222.818	230.651	233.266
.63115E+08	207.596	207.606	207.697	222.281	229.850	232.372
.94673E+08	206.347	206.357	206.445	220.634	228.000	230.451
.12623E+09	204.775	204.784	204.870	218.729	225.926	228.316
.15779E+09	203.228	203.237	203.321	216.901	223.954	226.293
.18935E+09	201.417	201.426	201.507	214.806	221.713	224.000
.22090E+09	199.794	199.803	199.883	212.937	219.717	221.959
.25246E+09	198.341	198.350	198.428	211.250	217.909	220.109
.28402E+09	196.327	196.335	196.412	209.038	215.596	217.759
.31558E+09	194.725	194.734	194.809	207.264	213.735	215.867
.63115E+09	179.397	179.404	179.467	190.210	195.811	197.644
.94673E+09	166.439	166.445	166.498	175.895	180.794	182.383
.12623E+10	155.018	155.023	155.068	163.402	167.744	169.136
.15779E+10	145.485	145.490	145.530	152.937	156.794	158.017
.18935E+10	137.803	137.806	137.842	144.479	147.942	149.034
.22090E+10	131.434	131.438	131.469	137.463	140.590	141.572
.25246E+10	125.748	125.751	125.779	131.241	134.091	134.982
.28402E+10	121.350	121.353	121.379	126.412	129.038	129.856
.31558E+10	117.466	117.469	117.492	122.130	124.550	125.301
.63115E+10	98.8452	98.8466	98.8604	101.685	103.159	103.608
.94673E+10	91.7864	91.7874	91.7978	93.9728	95.1086	95.4523
.12623E+11	87.7510	87.7518	87.7604	89.5602	90.4997	90.7823
.15779E+11	84.9403	84.9410	84.9483	86.5004	87.3105	87.5533
.18935E+11	82.4218	82.4224	82.4288	83.7901	84.5003	84.7126
.22090E+11	80.3536	80.3541	80.3598	81.5756	82.2099	82.3988
.25246E+11	78.5489	78.5494	78.5545	79.6460	80.2152	80.3843
.28402E+11	77.0045	77.0049	77.0095	78.0011	78.5180	78.6712
.31558E+11	75.6963	75.6967	75.7009	76.6104	77.0845	77.2246

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP s02o180	135 TEMP t02o180	620 TEMP s10i180	699 TEMP h10i180	701 TEMP c10i180	703 TEMP h10o180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.229	203.226	203.241	208.848	208.914	204.142
31.558	203.229	203.227	203.242	208.848	208.913	204.142
.31558E+07	223.190	223.187	223.201	228.113	227.916	223.237
.63116E+07	226.442	226.439	226.453	231.267	231.040	226.384
.94673E+07	228.008	228.005	228.018	232.770	232.528	227.896
.12623E+08	228.974	228.971	228.984	233.689	233.437	228.826
.15779E+08	229.617	229.614	229.627	234.293	234.034	229.444
.18935E+08	230.044	230.041	230.054	234.688	234.424	229.853
.22090E+08	230.337	230.334	230.347	234.954	234.686	230.133
.25246E+08	230.531	230.528	230.541	235.122	234.852	230.316
.28402E+08	230.647	230.644	230.656	235.215	234.943	230.424
.31558E+08	230.704	230.701	230.714	235.251	234.978	230.475
.63115E+08	229.884	229.882	229.894	234.279	234.008	229.644
.94673E+08	228.018	228.015	228.027	232.307	232.048	227.799
.12623E+09	225.928	225.925	225.937	230.133	229.888	225.741
.15779E+09	223.943	223.940	223.952	228.079	227.848	223.787
.18935E+09	221.688	221.685	221.696	225.756	225.540	221.568
.22090E+09	219.681	219.678	219.689	223.690	223.486	219.592
.25246E+09	217.861	217.859	217.870	221.813	221.620	217.799
.28402E+09	215.537	215.535	215.545	219.447	219.269	215.515
.31558E+09	213.669	213.666	213.677	217.541	217.376	213.678
.63115E+09	195.688	195.686	195.695	199.154	199.084	195.931
.94673E+09	180.629	180.627	180.635	183.750	183.746	181.022
.12623E+10	167.535	167.534	167.540	170.384	170.430	168.043
.15779E+10	156.557	156.556	156.562	159.149	159.225	157.121
.18935E+10	147.702	147.701	147.706	150.065	150.156	148.280
.22090E+10	140.355	140.354	140.359	142.516	142.614	140.930
.25246E+10	133.862	133.861	133.866	135.853	135.957	134.431
.28402E+10	128.816	128.815	128.819	130.667	130.773	129.372
.31558E+10	124.334	124.334	124.337	126.053	126.159	124.872
.63115E+10	102.995	102.995	102.997	104.084	104.172	103.400
.94673E+10	94.9724	94.9721	94.9738	95.8214	95.8952	95.3018
.12623E+11	90.3809	90.3806	90.3821	91.0889	91.1526	90.6622
.15779E+11	87.2051	87.2048	87.2060	87.8182	87.8746	87.4520
.18935E+11	84.4053	84.4050	84.4061	84.9456	84.9965	84.6265
.22090E+11	82.1228	82.1226	82.1235	82.6075	82.6540	82.3239
.25246E+11	80.1354	80.1352	80.1360	80.5719	80.6145	80.3185
.28402E+11	78.4440	78.4439	78.4446	78.8419	78.8812	78.6124
.31558E+11	77.0155	77.0154	77.0161	77.3812	77.4177	77.1713

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.614	193.577	193.559	192.655	186.082	174.345

31.558	193.615	193.578	193.559	192.654	186.082	174.345
.31558E+07	213.236	213.199	213.179	211.825	205.225	193.822
.63116E+07	216.481	216.443	216.423	215.017	208.435	197.113
.94673E+07	218.068	218.031	218.010	216.580	210.023	198.775
.12623E+08	219.061	219.023	219.003	217.558	211.026	199.841
.15779E+08	219.732	219.695	219.674	218.220	211.713	200.584
.18935E+08	220.189	220.152	220.132	218.673	212.190	201.114
.22090E+08	220.514	220.477	220.457	218.995	212.536	201.509
.25246E+08	220.739	220.703	220.682	219.220	212.784	201.804
.28402E+08	220.887	220.850	220.830	219.368	212.955	202.020
.31558E+08	220.976	220.939	220.919	219.459	213.069	202.177
.63115E+08	220.449	220.414	220.395	218.971	212.782	202.249
.94673E+08	218.846	218.812	218.793	217.419	211.404	201.165
.12623E+09	216.993	216.960	216.941	215.618	209.757	199.771
.15779E+09	215.214	215.181	215.164	213.887	208.159	198.391
.18935E+09	213.173	213.141	213.124	211.896	206.306	196.762
.22090E+09	211.351	211.320	211.304	210.119	204.648	195.299
.25246E+09	209.705	209.675	209.658	208.513	203.154	193.989
.28402E+09	207.550	207.520	207.504	206.403	201.149	192.153
.31558E+09	205.822	205.793	205.778	204.713	199.546	190.693
.63115E+09	189.167	189.143	189.130	188.377	184.065	176.579
.94673E+09	175.113	175.093	175.083	174.566	170.914	164.481
.12623E+10	162.808	162.791	162.782	162.443	159.301	153.684
.15779E+10	152.468	152.453	152.446	152.227	149.497	144.564
.18935E+10	144.113	144.100	144.094	143.948	141.544	137.165
.22090E+10	137.169	137.158	137.153	137.061	134.922	130.998
.25246E+10	131.006	130.996	130.991	130.941	129.019	125.468
.28402E+10	126.217	126.208	126.204	126.181	124.430	121.176
.31558E+10	121.966	121.957	121.954	121.952	120.354	117.370
.63115E+10	101.629	101.624	101.622	101.680	100.751	98.9733
.94673E+10	93.9352	93.9316	93.9301	93.9884	93.2837	91.9236
.12623E+11	89.5296	89.5266	89.5254	89.5812	89.0033	87.8818
.15779E+11	86.4747	86.4721	86.4711	86.5229	86.0272	85.0621
.18935E+11	83.7690	83.7667	83.7659	83.8151	83.3831	82.5390
.22090E+11	81.5576	81.5557	81.5549	81.6018	81.2181	80.4658
.25246E+11	79.6303	79.6285	79.6278	79.6721	79.3292	78.6551
.28402E+11	77.9869	77.9854	77.9847	78.0267	77.7165	77.1050
.31558E+11	76.5973	76.5959	76.5953	76.6351	76.3514	75.7912

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0555
.20000E-05	156.239	156.178	156.141	152.988	144.118	129.292
31.558	156.239	156.178	156.141	152.988	144.118	129.292
.31558E+07	176.602	176.541	176.503	173.037	164.376	150.149
.63116E+07	180.062	180.001	179.963	176.467	167.859	153.773
.94673E+07	181.856	181.795	181.757	178.252	169.695	155.720
.12623E+08	183.032	182.971	182.933	179.427	170.915	157.033
.15779E+08	183.871	183.810	183.772	180.270	171.799	157.998
.18935E+08	184.488	184.427	184.389	180.894	172.462	158.736
.22090E+08	184.964	184.904	184.866	181.378	172.983	159.326
.25246E+08	185.335	185.275	185.238	181.758	173.400	159.809
.28402E+08	185.624	185.564	185.527	182.057	173.733	160.205
.31558E+08	185.851	185.791	185.754	182.294	174.004	160.536
.63115E+08	186.490	186.433	186.396	183.041	175.038	162.060
.94673E+08	185.861	185.806	185.771	182.517	174.754	162.171
.12623E+09	184.857	184.803	184.769	181.611	174.055	161.810
.15779E+09	183.809	183.757	183.723	180.649	173.272	161.314

.18935E+09	182.518	182.467	182.435	179.448	172.254	160.590
.22090E+09	181.349	181.299	181.267	178.358	171.322	159.911
.25246E+09	180.314	180.265	180.234	177.395	170.509	159.336
.28402E+09	178.722	178.674	178.644	175.878	169.128	158.168
.31558E+09	177.470	177.423	177.393	174.688	168.053	157.273
.63115E+09	165.343	165.305	165.281	163.125	157.576	148.498
.94673E+09	154.772	154.739	154.720	152.966	148.231	140.461
.12623E+10	145.165	145.137	145.120	143.660	139.559	132.799
.15779E+10	137.072	137.049	137.034	135.806	132.232	126.317
.18935E+10	130.495	130.474	130.461	129.409	126.252	121.010
.22090E+10	125.006	124.987	124.976	124.063	121.247	116.557
.25246E+10	120.034	120.018	120.008	119.207	116.671	112.433
.28402E+10	116.187	116.172	116.163	115.448	113.132	109.253
.31558E+10	112.788	112.774	112.766	112.126	110.009	106.456
.63115E+10	96.2249	96.2171	96.2126	95.8739	94.6320	92.5300
.94673E+10	89.8156	89.8097	89.8064	89.5597	88.6157	87.0119
.12623E+11	86.1409	86.1360	86.1333	85.9361	85.1605	83.8398
.15779E+11	83.5624	83.5583	83.5559	83.3891	82.7228	81.5868
.18935E+11	81.2255	81.2219	81.2199	81.0772	80.4958	79.5028
.22090E+11	79.2939	79.2907	79.2889	79.1643	78.6472	77.7628
.25246E+11	77.6040	77.6011	77.5995	77.4897	77.0272	76.2349
.28402E+11	76.1508	76.1482	76.1468	76.0487	75.6298	74.9114
.31558E+11	74.9163	74.9140	74.9127	74.8240	74.4406	73.7826

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.940
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4811	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.732	104.617	72.0571	71.0037	68.7719
.31.558	104.732	104.617	72.0571	71.0037	68.7719
.31558E+07	126.759	126.642	96.6620	95.5605	93.2974
.63116E+07	130.626	130.509	101.060	99.9568	97.6960
.94673E+07	132.769	132.652	103.578	102.479	100.231
.12623E+08	134.245	134.129	105.353	104.257	102.024
.15779E+08	135.355	135.240	106.714	105.622	103.402
.18935E+08	136.224	136.109	107.805	106.717	104.510
.22090E+08	136.936	136.822	108.719	107.634	105.439
.25246E+08	137.534	137.419	109.502	108.421	106.237
.28402E+08	138.038	137.924	110.180	109.103	106.930
.31558E+08	138.474	138.361	110.779	109.706	107.544
.63115E+08	140.842	140.732	114.401	113.364	111.287
.94673E+08	141.628	141.522	116.132	115.127	113.120
.12623E+09	141.841	141.737	117.123	116.146	114.199
.15779E+09	141.833	141.732	117.764	116.812	114.915
.18935E+09	141.602	141.503	118.180	117.254	115.408
.22090E+09	141.350	141.253	118.483	117.579	115.777
.25246E+09	141.175	141.081	118.831	117.947	116.187
.28402E+09	140.362	140.270	118.456	117.591	115.869
.31558E+09	139.767	139.676	118.234	117.386	115.695
.63115E+09	133.841	133.767	115.824	115.129	113.729
.94673E+09	127.954	127.892	112.560	111.978	110.795
.12623E+10	121.934	121.881	108.523	108.028	107.010
.15779E+10	116.825	116.779	105.085	104.659	103.777
.18935E+10	112.605	112.565	102.193	101.822	101.046
.22090E+10	109.044	109.009	99.7240	99.3964	98.7068
.25246E+10	105.648	105.616	97.2179	96.9257	96.3087
.28402E+10	103.045	103.016	95.3247	95.0600	94.4996
.31558E+10	100.771	100.745	93.6978	93.4575	92.9476
.63115E+10	89.1822	89.1674	84.9934	84.8587	84.5670
.94673E+10	84.4595	84.4485	81.2570	81.1565	80.9364

.12623E+11	81.7388	81.7298	79.0987	79.0168	78.8368
.15779E+11	79.7803	79.7726	77.5064	77.4366	77.2823
.18935E+11	77.9237	77.9170	75.9341	75.8735	75.7393
.22090E+11	76.3563	76.3504	74.5823	74.5289	74.4097
.25246E+11	74.9750	74.9697	73.3846	73.3369	73.2307
.28402E+11	73.7692	73.7644	72.3259	72.2830	72.1868
.31558E+11	72.7363	72.7320	71.4134	71.3742	71.2864

***** ROUTINE COMPLETED ***** CP = 64548.960

End of batch input file

PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44w.db
FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 29
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

```
*****
|                                     |
|               ANSYS RUN COMPLETED               |
|-----|
|               REV. 5.0 A               |               HP 9000/7XX               |
| CP TIME      (sec) =    64553.030      | TIME = 06:24:30      |
| ELAPSED TIME (sec) =    73500.000      | DATE  = 06/20/95      |
|-----|
|                                     |
|*****|
```


WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****

JOB NAME = ucf44j
 MEMORY REQUESTED (MB) = 64.0
 BATCH MODE REQUESTED
 start.ans FILE

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	16777216	64.000 MB	COMMAND LINE
MINIMUM WORK SPACE REQUIRED	=	4718592	18.000 MB	
MINIMUM WORK SPACE RECOMMENDED	=	6702496	25.568 MB	
WORK SPACE OBTAINED	=	16777216	64.000 MB	
BYTES PER WORD	=	4		

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 ERRORS ENCOUNTERED IN EITHER THE DOCUMENTATION OR THE
 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)

ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM

ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

```

1 /COM, *****
2 /COM, ANSYS REVISION 5.0A 6/16/1995
3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
4 /COM, *****
5 /COM, *
6 /COM, * File name: ucf44j.inp
7 /COM, * 44 BWR UCF with Low T.L. Disposal Container
8 /COM, * Helium Fill Gas
9 /COM, *
10 /COM, * Material Property file: props01.dat
11 /COM, *
12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes)
13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative)
14 /COM, *
15 /COM, * SNF Heat Loads file: bwr1049.dat
16 /COM, * SNF Type: 10 years old, 49000 MWd/MTU
17 /COM, *
18 /COM, * Surface Temp. file: c21j5a.parm
    
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19 /COM, *      25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 67.5 m *
22 /COM, *      WP c/c spacing = 21.554 m *
23 /COM, *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,parm,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21j5a,parm,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 DCRAD=1.5260/2.0
68 OWALL=0.0500
69 IWALL=0.0200
70 DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 GCORL=320.0/1000.0
73 GCORS=181.6/1000.0
74 GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 HCELL=153.0/1000.0/2.0
79 SWALL=3.5/1000.0
80 TWALL=20.0/1000.0
81 THWLL=TWALL/2.0
82 /COM,
83 ACTVL=150.0*2.54/100.0
84 PEAKF=1.40
85 /COM, Define calculated parameters
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLU = assy_volume=cell_width^2*active_length

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89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.                (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.          (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLUME=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,  ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,  MI45=MIRAD/SQRT(2.0)
123 /COM,  MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCIRD-OWALL)/SQRT(2.0)
126 DO45=DCIRD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,  *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01,dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049,dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLUME),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTEMP
181 MPTEMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTEMP
188 MPTEMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTEMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Define new material 15 for low thermal loading
204 /COM, outer barrier of 70/30 Copper Nickel (C71500)
205 /COM, Density: DENS (kg/m^3)
206 /COM, Conductivity: KXX (W/m/K)
207 /COM, Specific Heat: C (J/kg/K)
208 MPTEMP
209 MPTEMP, 1, .00000E+00,
210 /COM, Density (lb/in^3 converted to kg/m^3)
211 MPDATA,DENS,15, 1,(0.323*2.768E+04),
212 /COM, Specific Heat (Btu/lb/F converted to J/kg/K)
213 MPDATA, C,15, 1,(0.09/2.3886E-04),
214 /COM, Conductivity (Btu/hr/ft/F converted to W/m/K)
215 MPTEMP
216 MPTEMP, 1, (5.0/9.0*(68.0-32.0)), (5.0/9.0*(212.0-32.0)),
217 MPTEMP, 3, (5.0/9.0*(392.0-32.0)), (5.0/9.0*(572.0-32.0)),
218 MPTEMP, 5, (5.0/9.0*(752.0-32.0)), (5.0/9.0*(932.0-32.0)),
219 MPTEMP, 7,(5.0/9.0*(1112.0-32.0)),(5.0/9.0*(1292.0-32.0)),
220 MPDATA, KXX,15, 1, (17.0*1.7307), (16.9*1.7307),
221 MPDATA, KXX,15, 3, (19.7*1.7307), (22.3*1.7307),
222 MPDATA, KXX,15, 5, (24.9*1.7307), (27.8*1.7307),
223 MPDATA, KXX,15, 7, (30.7*1.7307), (33.6*1.7307),
224 /COM, *****
225 /COM, Construct geometry for Disposal Container
226 /COM,
227 /COM, Define center and axis keypoints for waste package
228 /COM, Also, create placeholder keypoints and lines

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229 /COM,          (K's 1,2,3,4,5,6,7,8)
230 /COM,          (L's 1,2,3,4)
231 K,1,0.0,0.0,0.0,
232 K,2,0.0,0.0,1.0,
233 K,3,0.0,0.0,1.3,
234 K,4,0.0,0.0,1.4,
235 K,5,0.0,0.0,1.5,
236 K,6,0.0,0.0,1.6,
237 K,7,0.0,0.0,1.7,
238 K,8,0.0,0.0,1.8,
239 L,3,4,
240 L,4,5,
241 L,5,6,
242 L,6,7,
243 /COM,          Define disposal container outer radius and material interface
244 /COM,          (K's 9,10,11,12,13,14)
245 /COM,          (L's 5,6,7,8,9,10,11)
246 /COM,          (A's 1,2)
247 K, 9,          0.0,          (0.0-DCRAD),0.0,
248 K,10,          DCRAD,          0.0,0.0,
249 K,11,          0.0,          DCRAD,0.0,
250 K,12,          0.0,          (OWALL-DCRAD),0.0,
251 K,13,          (DCRAD-OWALL), 0.0,0.0,
252 K,14,          0.0,          (DCRAD-OWALL),0.0,
253 L,10,13,
254 LARC,10, 9,1,          DCRAD,
255 LARC,11,10,1,          DCRAD,
256 LARC,13,12,1,          (DCRAD-OWALL),
257 LARC,14,13,1,          (DCRAD-OWALL),
258 L,11,14,
259 L, 9,12,
260 AL, 5, 6,11, 8,
261 AL,10, 7, 5, 9,
262 /COM,          *****
263 /COM,          Define UCF shell inner edge and area
264 /COM,          (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
265 /COM,          ( 31,32,33,34,35)
266 /COM,          (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
267 /COM,          ( 28,29,30,31,32,33,34)
268 /COM,          (A's 3,4)
269 K,15, 0.0,          DCIRD,0.0,
270 K,16, GX22,          GY22,0.0,
271 K,17, GX23,          GY23,0.0,
272 K,18, GX24,          GY24,0.0,
273 K,19, GX25,          GY25,0.0,
274 K,20, DI45,          DI45,0.0,
275 K,21, GY25,          GX25,0.0,
276 K,22, GY24,          GX24,0.0,
277 K,23, GY23,          GX23,0.0,
278 K,24, GY22,          GX22,0.0,
279 K,25,DCIRD,          0.0,0.0,
280 K,26, GY22, (0.0-GX22),0.0,
281 K,27, GY23, (0.0-GX23),0.0,
282 K,28, GY24, (0.0-GX24),0.0,
283 K,29, GY25, (0.0-GX25),0.0,
284 K,30, DI45, (0.0-DI45),0.0,
285 K,31, GX25, (0.0-GY25),0.0,
286 K,32, GX24, (0.0-GY24),0.0,
287 K,33, GX23, (0.0-GY23),0.0,
288 K,34, GX22, (0.0-GY22),0.0,
289 K,35, 0.0,(0.0-DCIRD),0.0,
290 L,14,15,
291 LARC,16,15,1,DCIRD,
292 LARC,17,16,1,DCIRD,
293 LARC,18,17,1,DCIRD,
294 LARC,19,18,1,DCIRD,
295 LARC,20,19,1,DCIRD,
296 LARC,21,20,1,DCIRD,
297 LARC,22,21,1,DCIRD,
298 LARC,23,22,1,DCIRD,

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299 LARC,24,23,1,DCIRD,
300 LARC,25,24,1,DCIRD,
301 LARC,26,25,1,DCIRD,
302 LARC,27,26,1,DCIRD,
303 LARC,28,27,1,DCIRD,
304 LARC,29,28,1,DCIRD,
305 LARC,30,29,1,DCIRD,
306 LARC,31,30,1,DCIRD,
307 LARC,32,31,1,DCIRD,
308 LARC,33,32,1,DCIRD,
309 LARC,34,33,1,DCIRD,
310 LARC,35,34,1,DCIRD,
311 L,12,35,
312 L,25,13,
313 LSEL,S,LINE,,12,22,
314 LSEL,A,LINE,,9,
315 LSEL,A,LINE,,34,
316 AL,ALL,
317 LSEL,S,LINE,,23,33,
318 LSEL,A,LINE,,8,
319 LSEL,A,LINE,,34,
320 AL,ALL,
321 LSEL,ALL,
322 /COM, *****
323 /COM, Define thermal shunts
324 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
325 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
326 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
327 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
328 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
329 /COM, ( 84,85,86,87,88,89,90,91,92)
330 /COM, (A's 5 - 26)
331 /COM,
332 /COM, horizontal thermal shunt
333 K,36, 0.0, (0.0-THWLL),0.0,
334 K,37, 0.0, THWLL,0.0,
335 K,38, THWLL, (0.0-THWLL),0.0,
336 K,39, THWLL, 0.0,0.0,
337 K,40, THWLL, THWLL,0.0,
338 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
339 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
340 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
341 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
342 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
343 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
344 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
345 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
346 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
347 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
348 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
349 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
350 /COM, vertical thermal shunt
351 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
352 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
353 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
354 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
355 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
356 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
357 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
358 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
359 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
360 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
361 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
362 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
363 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
364 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
365 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
366 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
367 /COM, Lines: shunt widths, horizontal then vertical: (35-57)
368 L,36, 1,

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369 L, 1,37,
370 L,38,39,
371 L,39,40,
372 L,41,42,
373 L,42,43,
374 L,44,45,
375 L,45,46,
376 L,47,48,
377 L,48,49,
378 L,50,51,
379 L,51,52,
380 L,53,54,
381 L,55,56,
382 L,57,58,
383 L,59,60,
384 L,37,40,
385 L, 1,39,
386 L,36,38,
387 L,61,62,
388 L,63,64,
389 L,65,66,
390 L,67,68,
391 /COM, Lines; shunt edges, horizontal then vertical: (58-92)
392 L,38,41,
393 L,39,42,
394 L,40,43,
395 L,41,44,
396 L,42,45,
397 L,43,46,
398 L,44,47,
399 L,45,48,
400 L,46,49,
401 L,47,50,
402 L,48,51,
403 L,49,52,
404 L,26,50,
405 L,25,51,
406 L,52,24,
407 L,15,53,
408 L,16,54,
409 L,53,55,
410 L,54,56,
411 L,55,57,
412 L,56,58,
413 L,57,59,
414 L,58,60,
415 L,59,37,
416 L,60,40,
417 L,36,61,
418 L,38,62,
419 L,61,63,
420 L,62,64,
421 L,63,65,
422 L,64,66,
423 L,65,67,
424 L,66,68,
425 L,67,35,
426 L,68,34,
427 /COM, define areas for thermal shunts
428 AL,35,53,37,52,
429 AL,36,52,38,51,
430 AL,37,58,39,59,
431 AL,38,59,40,60,
432 AL,39,61,41,62,
433 AL,40,62,42,63,
434 AL,41,64,43,65,
435 AL,42,65,44,66,
436 AL,43,67,45,68,
437 AL,44,68,46,69,
438 AL,45,70,23,71,

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439 AL,46,71,22,72,
440 AL,73,47,74,13,
441 AL,75,48,76,47,
442 AL,77,49,78,48,
443 AL,79,50,80,49,
444 AL,81,51,82,50,
445 AL,83,54,84,53,
446 AL,85,55,86,54,
447 AL,87,56,88,55,
448 AL,89,57,90,56,
449 AL,91,32,92,57,
450 /COM, *****
451 /COM, Define tube guides
452 /COM, (K's 69 - 92)
453 /COM, (L's 93 - 136)
454 /COM, (A's 27 - 46)
455 /COM,
456 /COM, top guide
457 K,69, (THWLL+1.0*PITCH), (THWLL+4.0*PITCH),0.0,
458 K,70,(THWLL+1.0*PITCH+GWALL), (THWLL+4.0*PITCH),0.0,
459 K,71, (THWLL+1.0*PITCH), (THWLL+3.0*PITCH),0.0,
460 K,72,(THWLL+1.0*PITCH+GWALL), (THWLL+3.0*PITCH+GWALL),0.0,
461 K,73, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH),0.0,
462 K,74, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH+GWALL),0.0,
463 K,75, (THWLL+3.0*PITCH), (THWLL+2.0*PITCH),0.0,
464 K,76,(THWLL+3.0*PITCH+GWALL), (THWLL+2.0*PITCH),0.0,
465 K,77, (THWLL+3.0*PITCH), (THWLL+1.0*PITCH),0.0,
466 K,78,(THWLL+3.0*PITCH+GWALL), (THWLL+1.0*PITCH+GWALL),0.0,
467 K,79, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH),0.0,
468 K,80, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH+GWALL),0.0,
469 /COM, bottom guide
470 K,81, (THWLL+4.0*PITCH), (-1.0*PITCH-THWLL),0.0,
471 K,82, (THWLL+4.0*PITCH),(-1.0*PITCH-GWALL-THWLL),0.0,
472 K,83, (THWLL+3.0*PITCH), (-1.0*PITCH-THWLL),0.0,
473 K,84,(THWLL+3.0*PITCH+GWALL),(-1.0*PITCH-GWALL-THWLL),0.0,
474 K,85, (THWLL+3.0*PITCH), (-2.0*PITCH-THWLL),0.0,
475 K,86,(THWLL+3.0*PITCH+GWALL), (-2.0*PITCH-THWLL),0.0,
476 K,87, (THWLL+2.0*PITCH), (-3.0*PITCH-THWLL),0.0,
477 K,88, (THWLL+2.0*PITCH),(-3.0*PITCH-GWALL-THWLL),0.0,
478 K,89, (THWLL+1.0*PITCH), (-3.0*PITCH-THWLL),0.0,
479 K,90,(THWLL+1.0*PITCH+GWALL),(-3.0*PITCH-GWALL-THWLL),0.0,
480 K,91, (THWLL+1.0*PITCH), (-4.0*PITCH-THWLL),0.0,
481 K,92,(THWLL+1.0*PITCH+GWALL), (-4.0*PITCH-THWLL),0.0,
482 /COM,
483 /COM, top guide
484 L,69,17,
485 L,18,70,
486 L,71,69,
487 L,70,72,
488 L,73,71,
489 L,72,74,
490 L,20,73,
491 L,74,19,
492 L,75,20,
493 L,21,76,
494 L,77,75,
495 L,76,78,
496 L,79,77,
497 L,78,80,
498 L,23,79,
499 L,80,22,
500 /COM, bottom guide
501 L,81,27,
502 L,28,82,
503 L,83,81,
504 L,82,84,
505 L,85,83,
506 L,84,86,
507 L,30,85,
508 L,86,29,

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509 L,87,30,
510 L,31,88,
511 L,89,87,
512 L,88,90,
513 L,91,89,
514 L,90,92,
515 L,33,91,
516 L,92,32,
517 /COM,          Guide thickness lines
518 L,69,70,
519 L,71,72,
520 L,73,74,
521 L,75,76,
522 L,77,78,
523 L,79,80,
524 L,82,81,
525 L,84,83,
526 L,86,85,
527 L,88,87,
528 L,90,89,
529 L,92,91,
530 /COM,          Guide steel
531 AL, 93,125, 94, 15,
532 AL, 95,126, 96,125,
533 AL, 97,127, 98,126,
534 AL, 99, 17,100,127,
535 AL,101,128,102, 18,
536 AL,103,129,104,128,
537 AL,105,130,106,129,
538 AL,107, 20,108,130,
539 AL,109,131,110, 25,
540 AL,111,132,112,131,
541 AL,113,133,114,132,
542 AL,115, 27,116,133,
543 AL,117,134,118, 28,
544 AL,119,135,120,134,
545 AL,121,136,122,135,
546 AL,123, 30,124,136,
547 /COM,          Guide gaps
548 AL, 16, 94, 96, 98,100,
549 AL, 19,102,104,106,108,
550 AL, 26,110,112,114,116,
551 AL, 29,118,120,122,124,
552 /COM,          *****
553 /COM,          Define shell gaps at the exterior of the tube array
554 /COM,          (L's 137 - 140)
555 /COM,          (A's 47 - 50)
556 /COM,
557 L, 54, 69,
558 L, 79, 52,
559 L, 50, 81,
560 L, 91, 68,
561 /COM,
562 AL, 14, 74,137, 93,
563 AL, 21,107,138, 72,
564 AL, 24, 70,139,109,
565 AL, 31,123,140, 92,
566 /COM,          *****
567 /COM,          Define center full-tube
568 /COM,          (K's 93 - 100)
569 /COM,          (L's 141 - 152)
570 /COM,          (A's 51 - 56)
571 K, 93,          THWLL,          THWLL,0.0,
572 K, 94,          THWLL,          (THWLL+PITCH),0.0,
573 K, 95,          (THWLL+PITCH),    (THWLL+PITCH),0.0,
574 K, 96,          (THWLL+PITCH),    THWLL,0.0,
575 K, 97,          (THWLL+SWALL),    (THWLL+SWALL),0.0,
576 K, 98,          (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
577 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
578 K,100,(PITCH+THWLL-SWALL),    (THWLL+SWALL),0.0,

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579 L, 93, 97,
580 L, 94, 98,
581 L, 96, 100,
582 L, 95, 99,
583 L, 96, 93,
584 L, 100, 97,
585 L, 98, 99,
586 L, 94, 95,
587 L, 93, 94,
588 L, 97, 98,
589 L, 99, 100,
590 L, 95, 96,
591 AL, 149, 141, 150, 142,
592 AL, 145, 143, 146, 141,
593 AL, 152, 144, 151, 143,
594 AL, 148, 142, 147, 144,
595 AL, 150, 146, 151, 147,
596 /COM, *****
597 /COM, Set element shapes and sizes for tubes
598 /COM, 8x8 mesh in fuel with 2
599 /COM, divisions per tube layer
600 ESHAPE, 2,
601 ESIZE, 1,
602 LSEL, S, LINE, , 145, 152, 1,
603 LESIZE, ALL, , , 8,
604 LSEL, S, LINE, , 141, 144, 1,
605 LESIZE, ALL, , , 2,
606 LSEL, ALL,
607 /COM,
608 /COM, Mesh areas
609 /COM, first fuel, then stainless tubes
610 MAT, 14,
611 TYPE, 1,
612 AMESH, 55,
613 MAT, 1,
614 TYPE, 1,
615 AMESH, 51, 54, 1,
616 /COM, *****
617 /COM, Copy tube mesh
618 /COM,
619 /COM, center full tube side, above, and below
620 /COM, (A's 56 - 60 = Side 1)
621 AGEN, 2, 51, 55, 1, (1.0*PITCH), 0.0, 0.0, 0.0,
622 /COM, (A's 61 - 65 = Side 2)
623 AGEN, 2, 51, 55, 1, (2.0*PITCH), 0.0, 0.0, 0.0,
624 /COM, (A's 66 - 70 = Side 3)
625 AGEN, 2, 51, 55, 1, (3.0*PITCH), 0.0, 0.0, 0.0,
626 /COM,
627 /COM, (A's 71 - 75 = up 1)
628 AGEN, 2, 51, 55, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
629 /COM, (A's 76 - 80 = up 2)
630 AGEN, 2, 51, 55, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
631 /COM, (A's 81 - 85 = up 3)
632 AGEN, 2, 51, 55, 1, 0.0, (3.0*PITCH), 0.0, 0.0,
633 /COM,
634 /COM, (A's 86 - 90 = down 1)
635 AGEN, 2, 51, 55, 1, 0.0, (-1.0*PITCH-TWALL), 0.0, 0.0,
636 /COM, (A's 91 - 95 = down 2)
637 AGEN, 2, 51, 55, 1, 0.0, (-2.0*PITCH-TWALL), 0.0, 0.0,
638 /COM, (A's 96 - 100 = down 3)
639 AGEN, 2, 51, 55, 1, 0.0, (-3.0*PITCH-TWALL), 0.0, 0.0,
640 /COM, (A's 101 - 105 = down 4)
641 AGEN, 2, 51, 55, 1, 0.0, (-4.0*PITCH-TWALL), 0.0, 0.0,
642 /COM,
643 /COM, (A's 106 - 110 = up 1)
644 AGEN, 2, 56, 60, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
645 /COM, (A's 111 - 115 = up 2)
646 AGEN, 2, 56, 60, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
647 /COM,
648 /COM, (A's 116 - 120 = down 1)

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649 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
650 /COM, (A's 121 - 125 = down 2)
651 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
652 /COM, (A's 126 - 130 = down 3)
653 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
654 /COM,
655 /COM, (A's 131 - 135 = up 1)
656 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
657 /COM, (A's 136 - 140 = up 2)
658 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
659 /COM,
660 /COM, (A's 141 - 145 = down 1)
661 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
662 /COM, (A's 146 - 150 = down 2)
663 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
664 /COM, (A's 151 - 155 = down 3)
665 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
666 /COM,
667 /COM, (A's 156 - 160 = down 1)
668 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
669 /COM,
670 /COM, *****
671 /COM, Create mesh in tube guides, thermal shunts
672 /COM, Set mesh size for gaps.....
673 ESIZE,,2,
674 LSEL,S,LINE,, 35, 57,1,
675 LSEL,A,LINE,, 125,136,1,
676 LSEL,A,LINE,, 13, 15,2,
677 LSEL,A,LINE,, 17, 18,1,
678 LSEL,A,LINE,, 20, 22,2,
679 LSEL,A,LINE,, 23, 25,2,
680 LSEL,A,LINE,, 27, 28,1,
681 LSEL,A,LINE,, 30, 32,2,
682 LESIZE,ALL,,, 2,
683 LSEL,S,LINE,, 70, 74,1,
684 LSEL,A,LINE,, 91, 94,1,
685 LSEL,A,LINE,, 107,110,1,
686 LSEL,A,LINE,, 123,124,1,
687 LESIZE,ALL,,, 3,
688 LSEL,S,LINE,, 14, 21,7,
689 LSEL,A,LINE,, 24, 31,7,
690 LSEL,A,LINE,, 58, 69,1,
691 LSEL,A,LINE,, 75, 90,1,
692 LSEL,A,LINE,, 95,106,1,
693 LSEL,A,LINE,, 111,122,1,
694 LSEL,A,LINE,, 137,140,1,
695 LESIZE,ALL,,, 8,
696 LSEL,S,LINE,, 16, 19,3,
697 LSEL,A,LINE,, 26, 29,3,
698 LESIZE,ALL,,, 16,
699 /COM, MESH CORNER GUIDES
700 ESHAPE,2,
701 ESIZE,,1,
702 MAT,2,
703 TYPE,1,
704 AMESH,27,42,1,
705 /COM, MESH THERMAL SHUNTS
706 ESHAPE,2,
707 ESIZE,,1,
708 MAT,13,
709 TYPE,1,
710 AMESH, 5,26,1,
711 NUMMRG,NODE,
712 NUMMRG,KP,
713 /COM, *****
714 /COM, Create mesh in UCF inner shell
715 /COM, (L's 105,108 ????)
716 LSEL,S,LINE,,13,22,1,
717 LCCAT,ALL,
718 LSEL,S,LINE,,23,32,1,

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719 LCCAT,ALL,
720 LSEL,ALL,
721 LESIZE,8,,,60,
722 LESIZE,9,,,60,
723 LESIZE,12,,, 3,
724 LESIZE,33,,, 3,
725 MAT,2,
726 TYPE,1,
727 AMESH,3,4,1
728 /COM,          Delete concatenated lines
729 /COM,          (L's freed up 105,108 ????)
730 /COM,  LDELE,105,108,1,  LEAVE THEM FOR NOW, WHO CARES
731 /COM,
732 LSEL,S,LINE,,6,7,1,
733 LESIZE,ALL,,,60,
734 LSEL,ALL,
735 LESIZE, 5,,, 3,
736 LESIZE,10,,, 3,
737 LESIZE,11,,, 3,
738 MAT,15,
739 TYPE,1,
740 AMESH,1,2,1,
741 NUMMRG,NODE,
742 NUMMRG,KP,
743 /COM, *****
744 /COM,          Create mesh in empty basket spaces
745 ESIZE,0.1,
746 ESHAPE,0,
747 MAT,7,
748 TYPE,1,
749 AMESH,43,50,1,
750 NUMMRG,NODE,
751 NUMMRG,KP,
752 /COM, *****
753 /COM,          Create radiation surface elements
754 /COM,          Basket spaces
755 MAT,2,
756 TYPE,17,
757 LMESH, 14, 16,2,
758 LMESH, 19, 21,2,
759 LMESH, 24, 26,2,
760 LMESH, 29, 31,2,
761 LMESH, 93, 94,1,
762 LMESH, 96,124,2,
763 LMESH,107,109,2,
764 LMESH,123,
765 MAT,1,
766 TYPE,17,
767 LMESH,137,140,1,
768 MAT,13,
769 TYPE,17,
770 LMESH,70,72,2,
771 LMESH,74,
772 LMESH,92,
773 /COM,
774 FINISH
775 /COM, *****
776 /COM,          Create element mesh plots to illustrate model
777 /COM,          View mesh for entire model
778 /RESET
779 /TRIAD,OFF,
780 /NUM, 1,
781 /PNUM,MAT, 1,
782 /TYPE,HIDP,
783 /GLINE,,0,
784 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
785 /TITLE, 44 BWR UCF/Waste Package - 1/2 FEM Model
786 /SHOW,meshfull,grph,1,8,
787 EPLOT
788 ESEL,U,MAT,, 7,

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789 /SHOW,meshgap,grph,1,8,
790 EPLOT
791 /COM,          View mesh for radiation substructure
792 /PNUM,MAT, 0,
793 /PNUM,TYPE, 1,
794 ESEL,S,TYPE,,17,
795 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
796 /SHOW,meshrad,grph,1,8,
797 EPLOT
798 ESEL,ALL,
799 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
800 /COM,          *****
801 /COM,          Generate super-elements
802 /AUX12,
803 ESEL,S,TYPE,,17,
804 NSLE,S,
805 STEF,5.67E-8,
806 GEOM,1,0,
807 VTYPE,0,800,
808 WRITE,spaces,
809 ESEL,ALL,
810 NSEL,ALL,
811 FINISH
812 /PREP7,
813 TYPE,18,
814 SE,spaces,
815 /COM,          Delete radiation edge elements
816 LSEL,S,TYPE,,17,
817 LCLEAR,ALL,
818 LSEL,ALL,
819 FINISH
820 /COM,          *****
821 /COM,          Set solution parameters and apply B.C.'s.
822 /COM,
823 /COM,          Solve steady-state for initial conditions
824 /COM,          with WP surface equal to drift ambient
825 /COM,          temperature from repository model.
826 /SOLU
827 ANTYPE,TRAN,NEW,
828 NROPT,AUTO,
829 TRNOPT,FULL,
830 TOFFST,273.15,
831 LSEL,S,LINE,,6,
832 LSEL,A,LINE,,7,
833 NSLL,S,1,
834 D,ALL,TEMP,DFAMBT,
835 LSEL,ALL,
836 NSEL,ALL,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,1e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM,          Solve steady-state for initial conditions
848 /COM,          with WP surface temperatures from repository
849 /COM,          steady-state solution.
850 LSEL,S,LINE,,6,
851 LSEL,A,LINE,,7,
852 NSLL,S,1,
853 DDELE,ALL,TEMP,
854 LSEL,ALL,
855 NSEL,ALL,
856 DK,11,TEMP,(WPTOP(TM_START)),,1,
857 DK,10,TEMP,(WPSID(TM_START)),,1,
858 DK, 9,TEMP,(WPBOT(TM_START)),,1,

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859 ASEL,S,MAT,,14,
860 ESLA,S,
861 BFE,ALL,HGEN,,(FUEL(TM_START)),
862 ASEL,ALL,
863 ESEL,ALL,
864 TIMINT,OFF,
865 TIME,2e-6,
866 AUTOTS,ON,
867 KBC,0,
868 SOLVE
869 /COM, *****
870 /COM, Set time integration parameters
871 TIMINT,ON,
872 AUTOTS,ON,
873 /COM, Time substep ranges from 10 sec to 1/4 loadstep
874 NSUBST,10,40,5,ON
875 /COM, Begin Transient
876 /COM, Apply loads and solve for 0 to .9 years
877 *DO,TM,TM_START,TME0,TM10
878 TIME,TM,
879 ASEL,S,MAT,,14,
880 ESLA,S,
881 BFE,ALL,HGEN,,(FUEL(TM)),
882 ASEL,ALL
883 ESEL,ALL
884 DK,11,TEMP,(WPTOP(TM)),,1,
885 DK,10,TEMP,(WPSID(TM)),,1,
886 DK, 9,TEMP,(WPBOT(TM)),,1,
887 SOLVE
888 *ENDDO
889 /COM, Apply loads and solve for 1 to 9 years
890 *DO,TM,TME1,TME9,TM11
891 TIME,TM,
892 ASEL,S,MAT,,14,
893 ESLA,S,
894 BFE,ALL,HGEN,,(FUEL(TM)),
895 ASEL,ALL
896 ESEL,ALL
897 DK,11,TEMP,(WPTOP(TM)),,1,
898 DK,10,TEMP,(WPSID(TM)),,1,
899 DK, 9,TEMP,(WPBOT(TM)),,1,
900 SOLVE
901 *ENDDO
902 /COM, Apply loads and solve for 10 to 90 years
903 *DO,TM,TME10,TME90,TM110
904 TIME,TM,
905 ASEL,S,MAT,,14,
906 ESLA,S,
907 BFE,ALL,HGEN,,(FUEL(TM)),
908 ASEL,ALL
909 ESEL,ALL
910 DK,11,TEMP,(WPTOP(TM)),,1,
911 DK,10,TEMP,(WPSID(TM)),,1,
912 DK, 9,TEMP,(WPBOT(TM)),,1,
913 SOLVE
914 *ENDDO
915 /COM, Apply loads and solve for 100 to 1000 years
916 *DO,TM,TME100,TME1000,TM1100
917 TIME,TM,
918 ASEL,S,MAT,,14,
919 ESLA,S,
920 BFE,ALL,HGEN,,(FUEL(TM)),
921 ASEL,ALL
922 ESEL,ALL
923 DK,11,TEMP,(WPTOP(TM)),,1,
924 DK,10,TEMP,(WPSID(TM)),,1,
925 DK, 9,TEMP,(WPBOT(TM)),,1,
926 SOLVE
927 *ENDDO
928 FINISH

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929 SAVE,
930 /COM, *****
931 /COM, Create element contour plots of solution results
932 /COM,
933 /COM, Sort through solution results for time of max temp.
934 /POST26,
935 NSOL,2,(NODE((THWLL+SCELL),(-1.0*THWLL-SCELL),0.0)),TEMP,,peakclad,
936 STORE,NEW,
937 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
938 FINISH
939 /POST1,
940 /COM, Create temperature contour plots of WP at peak
941 /RESET
942 /TRIAD,OFF,
943 /NUM,1,
944 /PNUM,MAT,1,
945 /TYPE,HIDP,
946 /GLINE,-1,
947 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
948 ESEL,U,MAT,,7,
949 SET,NEAR,,,,TMTMAX,
950 /TITLE,44 BWR UCF/WP at Time of Peak Temp. (%TMTMAX/3.15576E7% years)
951 /SHOW,solupk,grph,0,8,
952 /CONTOUR,1,128,AUTO,
953 PLNSOL,TEMP,
954 /COM, Create temperature contour plots at 10, 50, and 100 yrs
955 SET,NEAR,,,,TME10,
956 /TITLE,44 BWR UCF/WP at 10 years
957 /SHOW,solu10,grph,0,8,
958 /CONTOUR,1,128,USER,
959 PLNSOL,TEMP,
960 SET,NEAR,,,,TME50,
961 /TITLE,44 BWR UCF/WP at 50 years
962 /SHOW,solu50,grph,0,8,
963 /CONTOUR,1,128,USER,
964 PLNSOL,TEMP,
965 SET,NEAR,,,,TME100,
966 /TITLE,44 BWR UCF/WP at 100 years
967 /SHOW,solu100,grph,0,8,
968 /CONTOUR,1,128,USER,
969 PLNSOL,TEMP,
970 ESEL,ALL,
971 FINISH
972 /COM, *****
973 /COM, Set some needed variable values:
974 /COM,
975 DATM=THWLL+SCELL
976 DAT1=DATM+PITCH
977 DAT2=DATM+(2.0*PITCH)
978 DAT3=DATM+(3.0*PITCH)
979 /COM, *****
980 /COM,
981 /COM, Print time/temperature output at specific locations
982 /COM, Save profile from center to edge
983 /COM,
984 /COM, Variable Legend: A01i000
985 /COM, c = center of assembly
986 /COM, h = halfway between center and tube
987 /COM, s = inside structural stainless tube layer
988 /COM, t = stainless tube cladding
989 /COM, g = tube guide
990 /COM, i = inner barrier of DC
991 /COM, o = outer barrier of DC
992 /COM, ## = ID number of assembly (01 is center)
993 /COM, i = side of assembly toward center of WP
994 /COM, o = side of assembly toward edge of WP
995 /COM, 000 = profile center down
996 /COM, 045 = profile 45 deg down
997 /COM, 090 = profile center side
998 /COM, 135 = profile 45 deg up

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999 /COM, 180 = profile center up
1000 /POST26,
1001 NUMVAR,30,
1002 /COM,
1003 /COM, *****
1004 /COM, *Temperature Profile from center offset to bottom of WP (0 deg.)*
1005 /COM, *****
1006 NSOL, 2, (NODE( DATM, 0.0,0.0)),TEMP,,ts1i000,
1007 NSOL, 3, (NODE( DATM, (0.0-THWLL),0.0)),TEMP,,t01i000,
1008 NSOL, 4, (NODE( DATM, (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
1009 NSOL, 5, (NODE( DATM, (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
1010 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i000,
1011 NSOL, 7, (NODE( DATM, (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
1012 NSOL, 8, (NODE( DATM, (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
1013 NSOL, 9, (NODE( DATM, (0.0-DATM-SCCELL),0.0)),TEMP,,t01o000,
1014 NSOL, 10, (NODE( DATM, (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
1015 NSOL, 11, (NODE( DATM, (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
1016 NSOL, 12, (NODE( DATM, (0.0-DAT1),0.0)),TEMP,,c09i000,
1017 NSOL, 13, (NODE( DATM, (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
1018 NSOL, 14, (NODE( DATM, (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
1019 NSOL, 15, (NODE( DATM, (0.0-DAT1-SCCELL),0.0)),TEMP,,t09o000,
1020 NSOL, 16, (NODE( DATM, (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,
1021 NSOL, 17, (NODE( DATM, (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1022 NSOL, 18, (NODE( DATM, (0.0-DAT2),0.0)),TEMP,,c15i000,
1023 NSOL, 19, (NODE( DATM, (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1024 NSOL, 20, (NODE( DATM, (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1025 NSOL, 21, (NODE( DATM, (0.0-DAT2-SCCELL),0.0)),TEMP,,t15o000,
1026 NSOL, 22, (NODE( DATM, (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1027 NSOL, 23, (NODE( DATM, (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1028 NSOL, 24, (NODE( DATM, (0.0-DAT3),0.0)),TEMP,,c21i000,
1029 NSOL, 25, (NODE( DATM, (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1030 NSOL, 26, (NODE( DATM, (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1031 NSOL, 27, (NODE( DATM, (0.0-DAT3-SCCELL),0.0)),TEMP,,t21o000,
1032 NSOL, 28, (NODE( DATM, (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1033 NSOL, 29, (NODE( DATM, (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1034 NSOL, 30, (NODE( DATM, (0.0-DCRAD),0.0)),TEMP,,o21o000,
1035 PRVAR, 2, 3, 4, 5, 6, 7,
1036 PRVAR, 8, 9,10,11,12,13,
1037 PRVAR,14,15,16,17,18,19,
1038 PRVAR,20,21,22,23,24,25,
1039 PRVAR,26,27,28,29,30,
1040 /COM,
1041 /COM, *****
1042 /COM, * Temperature Profile from center to lower right (45 deg.) *
1043 /COM, *****
1044 NSOL, 2, (NODE( 0.0, 0.0,0.0)),TEMP,,ts1i045,
1045 NSOL, 3, (NODE( THWLL, (0.0-THWLL),0.0)),TEMP,,t01i045,
1046 NSOL, 4, (NODE( (THWLL+SWALL), (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1047 NSOL, 5, (NODE( (DATM-QCELL), (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1048 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i045,
1049 NSOL, 7, (NODE( (DATM+QCELL), (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1050 NSOL, 8, (NODE( (DATM+HCELL), (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1051 NSOL, 9, (NODE( (DATM+SCCELL), (0.0-DATM-SCCELL),0.0)),TEMP,,t01o045,
1052 NSOL, 10, (NODE( (DAT1-HCELL), (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1053 NSOL, 11, (NODE( (DAT1-QCELL), (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1054 NSOL, 12, (NODE( DAT1, (0.0-DAT1),0.0)),TEMP,,c11i045,
1055 NSOL, 13, (NODE( (DAT1+QCELL), (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1056 NSOL, 14, (NODE( (DAT1+HCELL), (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1057 NSOL, 15, (NODE( (DAT1+SCCELL), (0.0-DAT1-SCCELL),0.0)),TEMP,,t11o045,
1058 NSOL, 16, (NODE( (DAT2-HCELL), (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1059 NSOL, 17, (NODE( (DAT2-QCELL), (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1060 NSOL, 18, (NODE( DAT2, (0.0-DAT2),0.0)),TEMP,,c19i045,
1061 NSOL, 19, (NODE( (DAT2+QCELL), (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1062 NSOL, 20, (NODE( (DAT2+HCELL), (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1063 NSOL, 21, (NODE( (DAT2+SCCELL), (0.0-DAT2-SCCELL),0.0)),TEMP,,t19o045,
1064 NSOL, 22, (NODE( DM45, (-1.0*DM45),0.0)),TEMP,,i19o045,
1065 NSOL, 23, (NODE( DO45, (-1.0*DO45),0.0)),TEMP,,o19o045,
1066 /COM, Add centers of assemblies 13 and 17
1067 NSOL, 24, (NODE( DAT2, (-1.0*D1AT1),0.0)),TEMP,,c13i045,
1068 NSOL, 25, (NODE( DAT1, (-1.0*D1AT2),0.0)),TEMP,,c17i045,

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1069 PRVAR, 2, 3, 4, 5, 6, 7,
1070 PRVAR, 8, 9, 10, 11, 12, 13,
1071 PRVAR, 14, 15, 16, 17, 18, 19,
1072 PRVAR, 20, 21, 22, 23, 24, 25,
1073 /COM,
1074 /COM, *****
1075 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1076 /COM, *****
1077 NSOL, 2, (NODE(      0.0, (0.0-DATM), 0.0)), TEMP, , ts2i180,
1078 NSOL, 3, (NODE(      (THWLL), (0.0-DATM), 0.0)), TEMP, , t02i180,
1079 NSOL, 4, (NODE(      (THWLL+SWALL), (0.0-DATM), 0.0)), TEMP, , s02i180,
1080 NSOL, 5, (NODE(      (DATM-QCELL), (0.0-DATM), 0.0)), TEMP, , h02i180,
1081 NSOL, 6, (NODE(      (DATM), (0.0-DATM), 0.0)), TEMP, , c02i180,
1082 NSOL, 7, (NODE(      (DATM+QCELL), (0.0-DATM), 0.0)), TEMP, , h02o180,
1083 NSOL, 8, (NODE(      (DATM+HCELL), (0.0-DATM), 0.0)), TEMP, , s02o180,
1084 NSOL, 9, (NODE(      (DATM+SCELL), (0.0-DATM), 0.0)), TEMP, , t02o180,
1085 NSOL, 10, (NODE(      (DAT1-HCELL), (0.0-DATM), 0.0)), TEMP, , s10i180,
1086 NSOL, 11, (NODE(      (DAT1-QCELL), (0.0-DATM), 0.0)), TEMP, , h10i180,
1087 NSOL, 12, (NODE(      (DAT1), (0.0-DATM), 0.0)), TEMP, , c10i180,
1088 NSOL, 13, (NODE(      (DAT1+QCELL), (0.0-DATM), 0.0)), TEMP, , h10o180,
1089 NSOL, 14, (NODE(      (DAT1+HCELL), (0.0-DATM), 0.0)), TEMP, , s10o180,
1090 NSOL, 15, (NODE(      (DAT1+SCELL), (0.0-DATM), 0.0)), TEMP, , t10o180,
1091 NSOL, 16, (NODE(      (DAT2-HCELL), (0.0-DATM), 0.0)), TEMP, , s16i180,
1092 NSOL, 17, (NODE(      (DAT2-QCELL), (0.0-DATM), 0.0)), TEMP, , h16i180,
1093 NSOL, 18, (NODE(      (DAT2), (0.0-DATM), 0.0)), TEMP, , c16i180,
1094 NSOL, 19, (NODE(      (DAT2+QCELL), (0.0-DATM), 0.0)), TEMP, , h16o180,
1095 NSOL, 20, (NODE(      (DAT2+HCELL), (0.0-DATM), 0.0)), TEMP, , s16o180,
1096 NSOL, 21, (NODE(      (DAT2+SCELL), (0.0-DATM), 0.0)), TEMP, , t16o180,
1097 NSOL, 22, (NODE(      (DAT3-HCELL), (0.0-DATM), 0.0)), TEMP, , s22i180,
1098 NSOL, 23, (NODE(      (DAT3-QCELL), (0.0-DATM), 0.0)), TEMP, , h22i180,
1099 NSOL, 24, (NODE(      (DAT3), (0.0-DATM), 0.0)), TEMP, , c22i180,
1100 NSOL, 25, (NODE(      (DAT3+QCELL), (0.0-DATM), 0.0)), TEMP, , h22o180,
1101 NSOL, 26, (NODE(      (DAT3+HCELL), (0.0-DATM), 0.0)), TEMP, , s22o180,
1102 NSOL, 27, (NODE(      (DAT3+SCELL), (0.0-DATM), 0.0)), TEMP, , t22o180,
1103 NSOL, 28, (NODE(      (DCRAD-OWALL-IWALL), (0.0-DATM), 0.0)), TEMP, , i22i180,
1104 NSOL, 29, (NODE(      (DCRAD-OWALL), (0.0-DATM), 0.0)), TEMP, , i22o180,
1105 NSOL, 30, (NODE(      (DCRAD), (0.0-DATM), 0.0)), TEMP, , o22o180,
1106 PRVAR, 2, 3, 4, 5, 6, 7,
1107 PRVAR, 8, 9, 10, 11, 12, 13,
1108 PRVAR, 14, 15, 16, 17, 18, 19,
1109 PRVAR, 20, 21, 22, 23, 24, 25,
1110 PRVAR, 26, 27, 28, 29, 30,
1111 /COM, *****
1112 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1113 /COM, *****
1114 NSOL, 2, (NODE(      0.0,      DATM, 0.0)), TEMP, , ts2i180,
1115 NSOL, 3, (NODE(      (THWLL),      DATM, 0.0)), TEMP, , t02i180,
1116 NSOL, 4, (NODE(      (THWLL+SWALL),      DATM, 0.0)), TEMP, , s02i180,
1117 NSOL, 5, (NODE(      (DATM-QCELL),      DATM, 0.0)), TEMP, , h02i180,
1118 NSOL, 6, (NODE(      (DATM),      DATM, 0.0)), TEMP, , c02i180,
1119 NSOL, 7, (NODE(      (DATM+QCELL),      DATM, 0.0)), TEMP, , h02o180,
1120 NSOL, 8, (NODE(      (DATM+HCELL),      DATM, 0.0)), TEMP, , s02o180,
1121 NSOL, 9, (NODE(      (DATM+SCELL),      DATM, 0.0)), TEMP, , t02o180,
1122 NSOL, 10, (NODE(      (DAT1-HCELL),      DATM, 0.0)), TEMP, , s10i180,
1123 NSOL, 11, (NODE(      (DAT1-QCELL),      DATM, 0.0)), TEMP, , h10i180,
1124 NSOL, 12, (NODE(      (DAT1),      DATM, 0.0)), TEMP, , c10i180,
1125 NSOL, 13, (NODE(      (DAT1+QCELL),      DATM, 0.0)), TEMP, , h10o180,
1126 NSOL, 14, (NODE(      (DAT1+HCELL),      DATM, 0.0)), TEMP, , s10o180,
1127 NSOL, 15, (NODE(      (DAT1+SCELL),      DATM, 0.0)), TEMP, , t10o180,
1128 NSOL, 16, (NODE(      (DAT2-HCELL),      DATM, 0.0)), TEMP, , s16i180,
1129 NSOL, 17, (NODE(      (DAT2-QCELL),      DATM, 0.0)), TEMP, , h16i180,
1130 NSOL, 18, (NODE(      (DAT2),      DATM, 0.0)), TEMP, , c16i180,
1131 NSOL, 19, (NODE(      (DAT2+QCELL),      DATM, 0.0)), TEMP, , h16o180,
1132 NSOL, 20, (NODE(      (DAT2+HCELL),      DATM, 0.0)), TEMP, , s16o180,
1133 NSOL, 21, (NODE(      (DAT2+SCELL),      DATM, 0.0)), TEMP, , t16o180,
1134 NSOL, 22, (NODE(      (DAT3-HCELL),      DATM, 0.0)), TEMP, , s22i180,
1135 NSOL, 23, (NODE(      (DAT3-QCELL),      DATM, 0.0)), TEMP, , h22i180,
1136 NSOL, 24, (NODE(      (DAT3),      DATM, 0.0)), TEMP, , c22i180,
1137 NSOL, 25, (NODE(      (DAT3+QCELL),      DATM, 0.0)), TEMP, , h22o180,
1138 NSOL, 26, (NODE(      (DAT3+HCELL),      DATM, 0.0)), TEMP, , s22o180,

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1139 NSOL,27,(NODE(      (DAT3+SCELL),      DATM,0.0)),TEMP,,t22o180,
1140 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1141 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1142 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1143 PRVAR, 2, 3, 4, 5, 6, 7,
1144 PRVAR, 8, 9,10,11,12,13,
1145 PRVAR,14,15,16,17,18,19,
1146 PRVAR,20,21,22,23,24,25,
1147 PRVAR,26,27,28,29,30,
1148 /COM,
1149 /COM, *****
1150 /COM, * Temperature Profile from center to upper right (135 deg.) *
1151 /COM, *****
1152 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1153 NSOL, 3,(NODE(      THWL,      (THWL),0.0)),TEMP,,t02i135,
1154 NSOL, 4,(NODE(      (THWL+SWALL),      (THWL+SWALL),0.0)),TEMP,,s02i135,
1155 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1156 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1157 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1158 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1159 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o135,
1160 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,
1161 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1162 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1163 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1164 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1165 NSOL,15,(NODE(      (DAT1+SCELL),      (DAT1+SCELL),0.0)),TEMP,,t12o135,
1166 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1167 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1168 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1169 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1170 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1171 NSOL,21,(NODE(      (DAT2+SCELL),      (DAT2+SCELL),0.0)),TEMP,,t20o135,
1172 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1173 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1174 /COM, Add centers of assemblies 13 and 17
1175 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1176 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1177 PRVAR, 2, 3, 4, 5, 6, 7,
1178 PRVAR, 8, 9,10,11,12,13,
1179 PRVAR,14,15,16,17,18,19,
1180 PRVAR,20,21,22,23,24,25,
1181 /COM,
1182 /COM, *****
1183 /COM, *Temperature Profile from center offset to top of WP (180 deg.)*
1184 /COM, *****
1185 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1186 NSOL, 3,(NODE(      (THWL),      (THWL),0.0)),TEMP,,t02i180,
1187 NSOL, 4,(NODE(      (THWL+SWALL),      (THWL+SWALL),0.0)),TEMP,,s02i180,
1188 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i180,
1189 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1190 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o180,
1191 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o180,
1192 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o180,
1193 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1194 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1195 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1196 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1197 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1198 NSOL,15,(NODE(      DATM,      (DAT1+SCELL),0.0)),TEMP,,t10o180,
1199 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1200 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1201 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1202 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1203 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1204 NSOL,21,(NODE(      DATM,      (DAT2+SCELL),0.0)),TEMP,,t16o180,
1205 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1206 NSOL,23,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22i180,
1207 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1208 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,

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1209 NSOL,26,(NODE(          DATM,          (DAT3+HCELL),0.0)),TEMP,,s22o180,
1210 NSOL,27,(NODE(          DATM,          (DAT3+SCELL),0.0)),TEMP,,t22o180,
1211 NSOL,28,(NODE(          DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1212 NSOL,29,(NODE(          DATM,          (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1213 NSOL,30,(NODE(          DATM,          (DCRAD),0.0)),TEMP,,o22o180,
1214 PRVAR, 2, 3, 4, 5, 6, 7,
1215 PRVAR, 8, 9,10,11,12,13,
1216 PRVAR,14,15,16,17,18,19,
1217 PRVAR,20,21,22,23,24,25,
1218 PRVAR,26,27,28,29,30,
1219 FINISH
1220 /COM, *****
1221 /COM,          End of batch input file
1222 /COM, *****
1223 /EXIT,
1224 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

```

/INPUT FILE= /ansys50a/docu/start.ans LINE=      0
*****
ANSYS STARTUP FILE start.ans
*****

```

```

ABBREVIATION= K1      /pnum,kp ,1,
ABBREVIATION= K0      /pnum,kp ,0,
ABBREVIATION= L1      /pnum,line,1,
ABBREVIATION= L0      /pnum,line,0,
ABBREVIATION= A1      /pnum,area,1,
ABBREVIATION= A0      /pnum,area,0,
ABBREVIATION= V1      /pnum,volu,1,
ABBREVIATION= V0      /pnum,volu,0,
ABBREVIATION= N1      /pnum,node,1,
ABBREVIATION= N0      /pnum,node,0,
ABBREVIATION= E1      /pnum,elem,1,
ABBREVIATION= E0      /pnum,elem,0,
ABBREVIATION= M1      /pnum,mat ,1,
ABBREVIATION= M0      /pnum,mat ,0,
ABBREVIATION= R1      /pnum,real,1,
ABBREVIATION= R0      /pnum,real,0,
ABBREVIATION= T1      /pnum,type,1,
ABBREVIATION= T0      /pnum,type,0,
ABBREVIATION= C1      /number,1,
ABBREVIATION= C0      /number,0,
ABBREVIATION= INP     /input,,inp,
ABBREVIATION= X3D     /show,3d,
ABBREVIATION= X11     /show,x11,

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ABBREVIATION= VEC /show,,,1,
 ABBREVIATION= RAS /show,,,0,
 ABBREVIATION= ON /menu,on,
 ABBREVIATION= OFF /menu,off,
 ABBREVIATION= NVP /config,nvpag,512,
 ABBREVIATION= QUIT /exit,nosav,
 XYZ TRIAD DISPLAY SET TO CFF

VIEW CONE ANGLE FOR WINDOW 1 25.00

 END start.ans

To start ANSYS menu:

type: x3d for console
 x11 for X-term

type: on

 ANSYS REVISION 5.0A 6/16/1995
 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz

 * *
 * File name: ucf44j.inp *
 * 44 BWR UCF with Low T.L. Disposal Container *
 * Helium Fill Gas *
 * *
 * Material Property file: props01.dat *
 * *
 * SNF Conductivity file: pwr15e.parm (Check for Changes) *
 * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
 * *
 * SNF Heat Loads file: bwr1049.dat *
 * SNF Type: 10 years old, 49000 MWd/MTU *
 * *
 * Surface Temp. file: c21j5a.parm *
 * 25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
 * 5.0 m Diameter Drift with Concrete Invert *
 * Drift spacing = 67.5 m *
 * WP c/c spacing = 21.554 m *
 * *

 Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512

Work space must also be increased (-m 64)

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED

LENGTH = METERS(M)
 MASS = KILOGRAMS(KG)
 TIME = SECONDS(SEC)
 TEMPERATURE = CENTIGRADE
 CURRENT = AMPS

Read in: average effective conductivities from SNF model

*** NOTE ***

CP= .610 TIME= 15:14:09

Restore ANSYS parameters from file= pwr15e.parm.

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

*** NOTE ***

CP= .840 TIME= 15:14:09

Restore ANSYS parameters from file= c21j5a.parm.

/INPUT FILE= c21j5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

Define UCF/waste package parameters

(UCF dimensions converted from inches/cm/mm to meters were requi

MIRAD = inner radius of UCF He Backfill shell (m) (NOT

MWALL = UCF He Backfill shell thickness (m) (NOT

DCRAD = disposal container outer radius (m)

OWALL = outer barrier thickness (m)

IWALL = inner barrier thickness (m)

DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)

GCORS = corner guide short side width (m)

GWALL = basket guide thickness (m)

GLEN1 = side guide 1/3 width (m) (NOT USED)

GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)

SWALL = stainless tube thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length

PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0

MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .7630000

PARAMETER OWALL = .5000000E-01

PARAMETER IWALL = .2000000E-01

PARAMETER DCIRD = .6930000

PARAMETER GCORL = .3200000

PARAMETER GCORS = .1816000

PARAMETER GWALL = .9500000E-02

GLEN1=9.6170*2.54/100.0

GLENT=28.866*2.54/100.0

PARAMETER HCELL = .7650000E-01

PARAMETER SWALL = .3500000E-02

PARAMETER TWALL = .2000000E-01

PARAMETER THWLL = .1000000E-01

PARAMETER ACTVL = 3.810000

PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)

FUEL = volumetric heat production (W/m³) f(yrs)

FVOLL = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)

QCELL = 1/4 of basket cell opening (m)

SCCELL = 1/2 of basket cell opening+SS wall(m)

ACCELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c

GY## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)

MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)

DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.

DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVOLL = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCCELL = .8000000E-01

ACCELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)

MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5395225

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
 TM_START = start time (sec)
 TMI* = time increment for solution (sec)
 TME* = start and stop for time do-loops (sec)
 TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760
 PARAMETER TMIO = 3155760.
 PARAMETER TMI1 = .3155760E+08
 PARAMETER TMI10 = .3155760E+09
 PARAMETER TMI100 = .3155760E+10
 PARAMETER TMI1000 = .3155760E+11
 PARAMETER TME0 = .2840187E+08
 PARAMETER TME1 = .3155763E+08
 PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

 Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:10 JUN 18, 1995 CP= 1.780
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP

THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **

** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density: DENS (kg/m^3) **

** Emissivity EMIS **

** Conductivity: KXX (W/m/K) **

** Specific Heat: C (J/kg/K) **

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 NUM. POINTS= 1

SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1
SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1
SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1
SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1
SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1
SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 21.11000 37.78000 65.56000
 93.33000 121.1100 148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 176.6700 204.4400 232.2200
 260.0000 287.7800 315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 343.3300 371.1100 398.8900
 426.6700 454.4400 482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 510.0000 537.7800 565.5600
 593.3300 621.1100 648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 676.6700 704.4400 732.2200
 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6
 SLOC= 1 13.33000 13.67000 14.19000 14.54000
 15.06000 15.58000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12
 SLOC= 7 15.92000 16.44000 16.96000 17.31000
 17.83000 18.17000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18
 SLOC= 13 18.52000 19.04000 19.38000 19.90000
 20.25000 20.77000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24
 SLOC= 19 21.11000 21.46000 21.98000 22.33000
 22.67000 23.02000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30
 SLOC= 25 23.54000 23.88000 24.23000 24.58000
 24.92000 25.27000

PROPERTY TABLE C MAT= 1 NUM. POINTS= 6
 SLOC= 1 481.6800 486.9200 498.0900 499.3800
 509.9800 520.2900

PROPERTY TABLE C MAT= 1 NUM. POINTS= 12
 SLOC= 7 521.0700 527.3800 536.9200 537.3400
 543.0200 543.3100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 18
 SLOC= 13 546.9100 552.1400 552.2600 557.2200
 557.2500 565.1100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 24
 SLOC= 19 565.0100 564.9100 572.3500 572.1400
 574.9200 574.6800

PROPERTY TABLE C MAT= 1 NUM. POINTS= 30
 SLOC= 25 581.6400 581.3000 583.8600 586.3600
 585.9600 588.3900

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6
 SLOC= 1 40.84000 41.36000 41.88000 42.23000
 42.23000 42.23000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12

SLOC= 7 42.06000 41.88000 41.36000 41.02000
40.50000 39.98000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 18
SLOC= 13 39.29000 38.77000 38.08000 37.56000
36.69000 36.17000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 24
SLOC= 19 35.48000 34.61000 33.92000 33.23000
32.36000 31.50000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 30
SLOC= 25 30.29000 28.90000 27.35000 26.48000
26.13000 26.13000

PROPERTY TABLE C MAT= 3 NUM. POINTS= 6
SLOC= 1 428.7200 444.9500 460.9400 476.8700
486.0800 495.6600

PROPERTY TABLE C MAT= 3 NUM. POINTS= 12
SLOC= 7 506.0900 517.0700 525.6400 536.9900
543.6300 550.6200

PROPERTY TABLE C MAT= 3 NUM. POINTS= 18
SLOC= 13 562.2100 577.3200 589.1000 600.5700
611.3500 629.0900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 24
SLOC= 19 645.3200 665.1200 682.0700 694.5200
724.0700 761.9500

PROPERTY TABLE C MAT= 3 NUM. POINTS= 30
SLOC= 25 806.3100 888.6000 1095.040 1638.780
808.6800 736.9000

Define K for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 93.33000 121.1100 148.8900
176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 260.0000 287.7800 315.5600
343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 426.6700 454.4400 482.2200
510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 593.3300 621.1100 648.8900
676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 27 ***
SLOC= 25 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 6
SLOC= 1 12.29000 12.63000 13.15000 13.67000
14.02000 14.54000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 12
SLOC= 7 14.88000 15.40000 15.75000 16.10000
16.61000 16.96000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 18
SLOC= 13 17.31000 17.65000 18.00000 18.52000
18.86000 19.21000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
 SLOC= 1 460.6900 477.4200 501.0200 504.6500
 498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
 SLOC= 7 536.8800 559.8500 576.8300 576.2100
 581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
 SLOC= 13 619.5800 636.7600 654.2000 678.2500
 696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 .0000000E+00 10.00000 20.00000
 30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 60.00000 70.00000 80.00000
 90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 120.0000 130.0000 140.0000
 150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 180.0000 190.0000 200.0000
 210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 240.0000 250.0000 260.0000
 270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
 SLOC= 31 300.0000 310.0000 320.0000
 330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
 SLOC= 37 360.0000 370.0000 380.0000
 390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
 SLOC= 43 420.0000 430.0000 440.0000

450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
SLOC= 1 8.720000 8.540000 8.360000 8.190000
8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
SLOC= 7 7.720000 7.580000 7.440000 7.310000
7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
SLOC= 13 6.930000 6.820000 6.700000 6.600000
6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
SLOC= 19 6.290000 6.190000 6.100000 6.010000
5.920000 5.840000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 30
SLOC= 25 5.760000 5.680000 5.600000 5.520000
5.450000 5.380000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 36
SLOC= 31 5.310000 5.240000 5.180000 5.110000
5.050000 4.990000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 42
SLOC= 37 4.930000 4.870000 4.810000 4.760000
4.700000 4.650000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 48
SLOC= 43 4.600000 4.550000 4.500000 4.450000
4.400000 4.350000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 50
SLOC= 48 4.310000 4.270000 4.220000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 6
SLOC= 1 12.29000 12.44000 12.58000 12.72000
12.87000 13.01000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 12
SLOC= 7 13.15000 13.28000 13.42000 13.55000
13.69000 13.82000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 18
SLOC= 13 13.95000 14.08000 14.21000 14.34000
14.46000 14.59000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 24
SLOC= 19 14.72000 14.84000 14.96000 15.09000
15.21000 15.33000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 30
SLOC= 25 15.45000 15.57000 15.69000 15.81000
15.93000 16.05000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 36
SLOC= 31 16.17000 16.29000 16.40000 16.52000
16.64000 16.76000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 42
SLOC= 37 16.88000 16.99000 17.11000 17.23000
17.35000 17.46000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 48

SLOC= 43 17.58000 17.70000 17.82000 17.94000
18.06000 18.18000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 50
SLOC= 48 18.30000 18.42000 18.54000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 6
SLOC= 1 1.940000 1.940000 1.940000 1.940000
1.940000 1.940000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 12
SLOC= 7 1.940000 1.950000 1.950000 1.950000
1.950000 1.950000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 18
SLOC= 13 1.950000 1.950000 1.960000 1.960000
1.960000 1.960000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 24
SLOC= 19 1.960000 1.970000 1.970000 1.970000
1.970000 1.980000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
SLOC= 25 1.980000 1.980000 1.980000 1.990000
1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
SLOC= 31 2.000000 2.000000 2.000000 2.010000
2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
SLOC= 37 2.020000 2.020000 2.020000 2.030000
2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
SLOC= 43 2.040000 2.040000 2.040000 2.050000
2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -13.15000 6.850000 26.85000
76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 226.8500 276.8500 326.8500
376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
SLOC= 1 .1875000 .1750000 .1625000 .1422000
.1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
.6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 6
SLOC= 1 .1370000 .1450000 .1520000 .1700000

	.1870000	.2040000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 12		
SLOC= 7	.2200000	.2360000	.2520000	.2640000
	.2780000	.2910000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 15		
SLOC= 13	.3040000	.3300000	.3540000	
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 6		
SLOC= 1	1.348000	1.254700	1.161400	.9950000
	.8711000	.7740000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 12		
SLOC= 7	.6964000	.6329000	.5804000	.5356000
	.4975000	.4643000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 15		
SLOC= 13	.4354000	.3868000	.3482000	
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2500000E-01	.2600000E-01	.3000000E-01
	.3400000E-01	.3700000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 12		
SLOC= 7	.4100000E-01	.4400000E-01	.4700000E-01	.5000000E-01
	.5200000E-01	.5500000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 15		
SLOC= 13	.5700000E-01	.6200000E-01	.6700000E-01	
PROPERTY TABLE C MAT=	8	NUM. POINTS= 6		
SLOC= 1	1006.200	1006.600	1007.000	1009.000
	1014.000	1021.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 12		
SLOC= 7	1030.000	1040.000	1051.000	1063.000
	1075.000	1087.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 15		
SLOC= 13	1099.000	1121.000	1141.000	
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 6		
SLOC= 1	1.303700	1.213500	1.123300	.9625000
	.8425000	.7485000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 12		
SLOC= 7	.6739000	.6124000	.5615000	.5214000
	.4812000	.4512000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 15		
SLOC= 13	.4211000	.3743000	.3368000	
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2400000E-01	.2600000E-01	.2900000E-01
	.3300000E-01	.3600000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 12		
SLOC= 7	.3900000E-01	.4200000E-01	.4500000E-01	.4700000E-01
	.5000000E-01	.5200000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 15		
SLOC= 13	.5500000E-01	.6000000E-01	.6500000E-01	
PROPERTY TABLE C MAT=	9	NUM. POINTS= 6		
SLOC= 1	1041.800	1041.400	1041.000	1042.000
	1045.000	1050.000		
PROPERTY TABLE C MAT=	9	NUM. POINTS= 12		
SLOC= 7	1056.000	1065.000	1075.000	1086.500

1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
.2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
.3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

Define K and C for material 12

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500
326.8500 526.8500 726.8500

PROPERTY TABLE KXX MAT= 12 NUM. POINTS= 6
SLOC= 1 413.0000 401.0000 393.0000 379.0000
366.0000 352.0000

PROPERTY TABLE C MAT= 12 NUM. POINTS= 6
SLOC= 1 356.0000 385.0000 397.0000 417.0000
433.0000 451.0000

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***
SLOC= 1 23.00000 50.00000 100.0000
150.0000 200.0000

PROPERTY TABLE KXX MAT= 13 NUM. POINTS= 5
SLOC= 1 182.5600 190.1700 199.2200 202.9100
203.7200

PROPERTY TABLE C MAT= 13 NUM. POINTS= 5
SLOC= 1 868.0000 903.0000 946.0000 976.0000
998.0000

** End of Material Property List **

Read in single assembly heat loads
Calculate the volumetric heat generation
(Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

** History of SNF Assembly Heat Generation Rates **
** Output of PHIA, SCSI: B00000000-01717-1200-3000X Rev.00B **
**
** Executable File Name: PHIA00B.EXE **
** Output File Name: bwr1049.dat **
** Execution Date: 03/07/95 **
** Start Age (years): 10.0 **
** Decay Period (years): 10000 **
** Enrichment (percent): 3.74 **
** Burnup (MWd/MTU): 49000 **
** Assembly Type: BWR **
** SNF U Mass (MTU/assy): 0.200 **
**

** ASSY(#,1) is the SNF assembly heat in Watts.

**

** ASSY(#,0) is the time post emplacement in years.

**

PARAMETER ASSY(1,1) =	409.4200 408.7300	409.2500 408.5500	409.0700	408.9000
PARAMETER ASSY(7,1) =	408.3800 407.6800	408.2000 406.8200	408.0300	407.8600
PARAMETER ASSY(13,1) =	405.9700 402.6100	405.1200 401.7900	404.2800	403.4400
PARAMETER ASSY(19,1) =	400.9700 397.7400	400.1500 396.9500	399.3400	398.5400
PARAMETER ASSY(25,1) =	396.1600 393.0600	395.3800 386.0700	394.6000	393.8300
PARAMETER ASSY(31,1) =	379.4900 357.2900	373.4300 352.6900	367.7000	362.3600
PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000

PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000 700.0000	550.0000 750.0000	600.0000	650.0000
PARAMETER ASSY(79,0) =	800.0000 1000.000	850.0000 1500.000	900.0000	950.0000
PARAMETER ASSY(85,0) =	2000.000 4000.000	2500.000 4500.000	3000.000	3500.000
PARAMETER ASSY(91,0) =	5000.000 7000.000	5500.000 7500.000	6000.000	6500.000
PARAMETER ASSY(97,0) =	8000.000 10000.00	8500.000	9000.000	9500.000

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)
 INPUT MATRIX= ASSY(1,0)
 INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS
 RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN
 FUEL(1) = COPY ASSY(1)
 SCALE FACTORS RESULT= 15.697 INPUT= 1.0000
 VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity
 Density: DENS (kg/m^3)
 Conductivity: KXX (W/m/K)
 Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
 SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
SLOC= 1 274.0000
Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Define new material 15 for low thermal loading
outer barrier of 70/30 Copper Nickel (C71500)
Density: DENS (kg/m^3)
Conductivity: KXX (W/m/K)
Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00
Density (lb/in^3 converted to kg/m^3)

PROPERTY TABLE DENS MAT= 15 NUM. POINTS= 1
SLOC= 1 8940.640
Specific Heat (Btu/lb/F converted to J/kg/K)

PROPERTY TABLE C MAT= 15 NUM. POINTS= 1
SLOC= 1 376.7898
Conductivity (Btu/hr/ft/F converted to W/m/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 1 20.00000 100.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 4 ***
 SLOC= 3 200.0000 300.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 5 400.0000 500.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 8 ***
 SLOC= 7 600.0000 700.0000

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 2
 SLOC= 1 29.42190 29.24883

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 4
 SLOC= 3 34.09479 38.59461

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 6
 SLOC= 5 43.09443 48.11346

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 8
 SLOC= 7 53.13249 58.15152

Construct geometry for Disposal Container

Define center and axis keypoints for waste package
 Also, create placeholder keypoints and lines
 (K's 1,2,3,4,5,6,7,8)
 (L's 1,2,3,4)

KEYPOINT	1	X,Y,Z=	.000000E+00	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	2	X,Y,Z=	.000000E+00	.000000E+00	1.00000	IN CSYS= 0
KEYPOINT	3	X,Y,Z=	.000000E+00	.000000E+00	1.30000	IN CSYS= 0
KEYPOINT	4	X,Y,Z=	.000000E+00	.000000E+00	1.40000	IN CSYS= 0
KEYPOINT	5	X,Y,Z=	.000000E+00	.000000E+00	1.50000	IN CSYS= 0
KEYPOINT	6	X,Y,Z=	.000000E+00	.000000E+00	1.60000	IN CSYS= 0
KEYPOINT	7	X,Y,Z=	.000000E+00	.000000E+00	1.70000	IN CSYS= 0
KEYPOINT	8	X,Y,Z=	.000000E+00	.000000E+00	1.80000	IN CSYS= 0

LINE CONNECTS KEYPOINTS 3 4
 LINE NO.= 1 KP1= 3 TAN1= .0000 .0000 -1.0000
 KP2= 4 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 4 5
 LINE NO.= 2 KP1= 4 TAN1= .0000 .0000 -1.0000
 KP2= 5 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 5 6
 LINE NO.= 3 KP1= 5 TAN1= .0000 .0000 -1.0000
 KP2= 6 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 6 7
 LINE NO.= 4 KP1= 6 TAN1= .0000 .0000 -1.0000
 KP2= 7 TAN2= .0000 .0000 1.0000

Define disposal container outer radius and material interface
 (K's 9,10,11,12,13,14)
 (L's 5,6,7,8,9,10,11)
 (A's 1,2)

KEYPOINT	9	X,Y,Z=	.000000E+00	-.763000	.000000E+00	IN CSYS= 0
KEYPOINT	10	X,Y,Z=	-.763000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	11	X,Y,Z=	.000000E+00	.763000	.000000E+00	IN CSYS= 0

KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0
 KEYPOINT 20 X,Y,Z= .490025 .490025 .000000E+00 IN CSYS= 0

KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS= 0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS= 0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS= 0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS= 0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS= 0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS= 0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS= 0

LINE CONNECTS KEYPOINTS		14	15			
LINE NO.=	12	KP1=	14	TAN1=	.0000	1.0000 .0000
		KP2=	15	TAN2=	.0000	-1.0000 .0000

ARC BETWEEN KEYPOINTS	16 AND	15	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	13	KP1=	16	TAN1= .9999 -.0144 .0000
		KP2=	15	TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS	17 AND	16	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	14	KP1=	17	TAN1= .9694 -.2453 .0000
		KP2=	16	TAN2= -.9999 .0144 .0000

ARC BETWEEN KEYPOINTS	18 AND	17	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	15	KP1=	18	TAN1= .9659 -.2590 .0000
		KP2=	17	TAN2= -.9694 .2453 .0000

ARC BETWEEN KEYPOINTS	19 AND	18	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	16	KP1=	19	TAN1= .7208 -.6932 .0000
		KP2=	18	TAN2= -.9659 .2590 .0000

ARC BETWEEN KEYPOINTS	20 AND	19	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	17	KP1=	20	TAN1= .7071 -.7071 .0000
		KP2=	19	TAN2= -.7208 .6932 .0000

ARC BETWEEN KEYPOINTS	21 AND	20	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	18	KP1=	21	TAN1= .6932 -.7208 .0000
		KP2=	20	TAN2= -.7071 .7071 .0000

ARC BETWEEN KEYPOINTS	22 AND	21	ORIENTATION KEYPOINT=	1
RADIUS=	.69300			
LINE NO.=	19	KP1=	22	TAN1= .2590 -.9659 .0000
		KP2=	21	TAN2= -.6932 .7208 .0000

ARC BETWEEN KEYPOINTS	23 AND	22	ORIENTATION KEYPOINT=	1
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RADIUS= .69300						
LINE NO.=	20	KP1=	23	TAN1=	.2453	-.9694 .0000
		KP2=	22	TAN2=	-.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 24 AND 23 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	21	KP1=	24	TAN1=	.0144	-.9999 .0000
		KP2=	23	TAN2=	-.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 23 AND 24 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	22	KP1=	25	TAN1=	.0000	-1.0000 .0000
		KP2=	24	TAN2=	-.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 26 AND 25 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	23	KP1=	26	TAN1=	-.0144	-.9999 .0000
		KP2=	25	TAN2=	.0000	1.0000 .0000
ARC BETWEEN KEYPOINTS 27 AND 26 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	24	KP1=	27	TAN1=	-.2453	-.9694 .0000
		KP2=	26	TAN2=	.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 28 AND 27 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	25	KP1=	28	TAN1=	-.2590	-.9659 .0000
		KP2=	27	TAN2=	.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 29 AND 28 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	26	KP1=	29	TAN1=	-.6932	-.7208 .0000
		KP2=	28	TAN2=	.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 30 AND 29 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	27	KP1=	30	TAN1=	-.7071	-.7071 .0000
		KP2=	29	TAN2=	.6932	.7208 .0000
ARC BETWEEN KEYPOINTS 31 AND 30 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	28	KP1=	31	TAN1=	-.7208	-.6932 .0000
		KP2=	30	TAN2=	.7071	.7071 .0000
ARC BETWEEN KEYPOINTS 32 AND 31 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	29	KP1=	32	TAN1=	-.9659	-.2590 .0000
		KP2=	31	TAN2=	.7208	.6932 .0000
ARC BETWEEN KEYPOINTS 33 AND 32 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	30	KP1=	33	TAN1=	-.9694	-.2453 .0000
		KP2=	32	TAN2=	.9659	.2590 .0000
ARC BETWEEN KEYPOINTS 34 AND 33 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	31	KP1=	34	TAN1=	-.9999	-.0144 .0000
		KP2=	33	TAN2=	.9694	.2453 .0000
ARC BETWEEN KEYPOINTS 35 AND 34 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	32	KP1=	35	TAN1=	-1.0000	.0000 .0000
		KP2=	34	TAN2=	.9999	.0144 .0000
LINE CONNECTS KEYPOINTS 12 35						
LINE NO.=	33	KP1=	12	TAN1=	.0000	-1.0000 .0000
		KP2=	35	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS 25 13						
LINE NO.=	34	KP1=	25	TAN1=	-1.0000	.0000 .0000

KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
(51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
(L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
(50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
(67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
(84,85,86,87,88,89,90,91,92)
(A's 5 - 26)

horizontal thermal shunt

KEYPOINT 36 X,Y,Z= .000000E+00 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 37 X,Y,Z= .000000E+00 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 38 X,Y,Z= .100000E-01 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 39 X,Y,Z= .100000E-01 .000000E+00 .000000E+00 IN CSYS= 0

KEYPOINT 40 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS= 0
		vertical thermal shunt				
KEYPOINT	53	X,Y,Z=	.000000E+00	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS= 0

Lines; shunt widths, horizontal then vertical: (35-57)

LINE CONNECTS KEYPOINTS	36	1			
LINE NO.= 35	KP1= 36	TAN1=	.0000	-1.0000	.0000
	KP2= 1	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	1	37			
LINE NO.= 36	KP1= 1	TAN1=	.0000	-1.0000	.0000
	KP2= 37	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	38	39			
LINE NO.= 37	KP1= 38	TAN1=	.0000	-1.0000	.0000
	KP2= 39	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		39	40			
LINE NO.=	38 KP1=	39	TAN1=	.0000	-1.0000	.0000
	KP2=	40	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		41	42			
LINE NO.=	39 KP1=	41	TAN1=	.0000	-1.0000	.0000
	KP2=	42	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		42	43			
LINE NO.=	40 KP1=	42	TAN1=	.0000	-1.0000	.0000
	KP2=	43	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		44	45			
LINE NO.=	41 KP1=	44	TAN1=	.0000	-1.0000	.0000
	KP2=	45	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		45	46			
LINE NO.=	42 KP1=	45	TAN1=	.0000	-1.0000	.0000
	KP2=	46	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		47	48			
LINE NO.=	43 KP1=	47	TAN1=	.0000	-1.0000	.0000
	KP2=	48	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		48	49			
LINE NO.=	44 KP1=	48	TAN1=	.0000	-1.0000	.0000
	KP2=	49	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		50	51			
LINE NO.=	45 KP1=	50	TAN1=	.0000	-1.0000	.0000
	KP2=	51	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		51	52			
LINE NO.=	46 KP1=	51	TAN1=	.0000	-1.0000	.0000
	KP2=	52	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		53	54			
LINE NO.=	47 KP1=	53	TAN1=	-1.0000	.0000	.0000
	KP2=	54	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		55	56			
LINE NO.=	48 KP1=	55	TAN1=	-1.0000	.0000	.0000
	KP2=	56	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		57	58			
LINE NO.=	49 KP1=	57	TAN1=	-1.0000	.0000	.0000
	KP2=	58	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		59	60			
LINE NO.=	50 KP1=	59	TAN1=	-1.0000	.0000	.0000
	KP2=	60	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		37	40			
LINE NO.=	51 KP1=	37	TAN1=	-1.0000	.0000	.0000
	KP2=	40	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		1	39			
LINE NO.=	52 KP1=	1	TAN1=	-1.0000	.0000	.0000
	KP2=	39	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		36	38			
LINE NO.=	53 KP1=	36	TAN1=	-1.0000	.0000	.0000
	KP2=	38	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		61	62			
LINE NO.=	54 KP1=	61	TAN1=	-1.0000	.0000	.0000
	KP2=	62	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		63	64			
LINE NO.=	55 KP1=	63	TAN1=	-1.0000	.0000	.0000

	KP2=	64	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 65 66						
LINE NO.=	56	KP1=	65	TAN1=	-1.0000	.0000
		KP2=	66	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 67 68						
LINE NO.=	57	KP1=	67	TAN1=	-1.0000	.0000
		KP2=	68	TAN2=	1.0000	.0000
Lines; shunt edges, horizontal then vertical: (58-92)						
LINE CONNECTS KEYPOINTS 38 41						
LINE NO.=	58	KP1=	38	TAN1=	-1.0000	.0000
		KP2=	41	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 39 42						
LINE NO.=	59	KP1=	39	TAN1=	-1.0000	.0000
		KP2=	42	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 40 43						
LINE NO.=	60	KP1=	40	TAN1=	-1.0000	.0000
		KP2=	43	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 41 44						
LINE NO.=	61	KP1=	41	TAN1=	-1.0000	.0000
		KP2=	44	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 42 45						
LINE NO.=	62	KP1=	42	TAN1=	-1.0000	.0000
		KP2=	45	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 43 46						
LINE NO.=	63	KP1=	43	TAN1=	-1.0000	.0000
		KP2=	46	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 44 47						
LINE NO.=	64	KP1=	44	TAN1=	-1.0000	.0000
		KP2=	47	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 45 48						
LINE NO.=	65	KP1=	45	TAN1=	-1.0000	.0000
		KP2=	48	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 46 49						
LINE NO.=	66	KP1=	46	TAN1=	-1.0000	.0000
		KP2=	49	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 47 50						
LINE NO.=	67	KP1=	47	TAN1=	-1.0000	.0000
		KP2=	50	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 48 51						
LINE NO.=	68	KP1=	48	TAN1=	-1.0000	.0000
		KP2=	51	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 49 52						
LINE NO.=	69	KP1=	49	TAN1=	-1.0000	.0000
		KP2=	52	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 26 50						
LINE NO.=	70	KP1=	26	TAN1=	1.0000	.0000
		KP2=	50	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 25 51						
LINE NO.=	71	KP1=	25	TAN1=	1.0000	.0000
		KP2=	51	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 52 24						
LINE NO.=	72	KP1=	52	TAN1=	-1.0000	.0000
		KP2=	24	TAN2=	1.0000	.0000

LINE CONNECTS KEYPOINTS	15	53			
LINE NO.= 73 KP1=	15	TAN1=	.0000	1.0000	.0000
KP2=	53	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	16	54			
LINE NO.= 74 KP1=	16	TAN1=	.0000	1.0000	.0000
KP2=	54	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	53	55			
LINE NO.= 75 KP1=	53	TAN1=	.0000	1.0000	.0000
KP2=	55	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	54	56			
LINE NO.= 76 KP1=	54	TAN1=	.0000	1.0000	.0000
KP2=	56	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	55	57			
LINE NO.= 77 KP1=	55	TAN1=	.0000	1.0000	.0000
KP2=	57	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	56	58			
LINE NO.= 78 KP1=	56	TAN1=	.0000	1.0000	.0000
KP2=	58	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	57	59			
LINE NO.= 79 KP1=	57	TAN1=	.0000	1.0000	.0000
KP2=	59	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	58	60			
LINE NO.= 80 KP1=	58	TAN1=	.0000	1.0000	.0000
KP2=	60	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	59	37			
LINE NO.= 81 KP1=	59	TAN1=	.0000	1.0000	.0000
KP2=	37	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	60	40			
LINE NO.= 82 KP1=	60	TAN1=	.0000	1.0000	.0000
KP2=	40	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	36	61			
LINE NO.= 83 KP1=	36	TAN1=	.0000	1.0000	.0000
KP2=	61	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	38	62			
LINE NO.= 84 KP1=	38	TAN1=	.0000	1.0000	.0000
KP2=	62	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	61	63			
LINE NO.= 85 KP1=	61	TAN1=	.0000	1.0000	.0000
KP2=	63	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	62	64			
LINE NO.= 86 KP1=	62	TAN1=	.0000	1.0000	.0000
KP2=	64	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	63	65			
LINE NO.= 87 KP1=	63	TAN1=	.0000	1.0000	.0000
KP2=	65	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	64	66			
LINE NO.= 88 KP1=	64	TAN1=	.0000	1.0000	.0000
KP2=	66	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	65	67			
LINE NO.= 89 KP1=	65	TAN1=	.0000	1.0000	.0000
KP2=	67	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	66	68			

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LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
              KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
              KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
              KP2= 34 TAN2= .0000 -1.0000 .0000
define areas for thermal shunts

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DEFINE AREA BY LIST OF LINES
LINE LIST = 35 53 37 52
(TRAVERSED IN SAME DIRECTION AS LINE 35)

```

AREA NUMBER = 5

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DEFINE AREA BY LIST OF LINES
LINE LIST = 36 52 38 51
(TRAVERSED IN SAME DIRECTION AS LINE 36)

```

AREA NUMBER = 6

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 37 58 39 59
(TRAVERSED IN SAME DIRECTION AS LINE 37)

```

AREA NUMBER = 7

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 38 59 40 60
(TRAVERSED IN SAME DIRECTION AS LINE 38)

```

AREA NUMBER = 8

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 39 61 41 62
(TRAVERSED IN SAME DIRECTION AS LINE 39)

```

AREA NUMBER = 9

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 40 62 42 63
(TRAVERSED IN SAME DIRECTION AS LINE 40)

```

AREA NUMBER = 10

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 41 64 43 65
(TRAVERSED IN SAME DIRECTION AS LINE 41)

```

AREA NUMBER = 11

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 42 65 44 66
(TRAVERSED IN SAME DIRECTION AS LINE 42)

```

AREA NUMBER = 12

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 43 67 45 68
(TRAVERSED IN SAME DIRECTION AS LINE 43)

```

AREA NUMBER = 13

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 44 68 46 69
(TRAVERSED IN SAME DIRECTION AS LINE 44)

```

AREA NUMBER = 14

DEFINE AREA BY LIST OF LINES

LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)

AREA NUMBER = 15

DEFINE AREA BY LIST OF LINES

LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)

AREA NUMBER = 16

DEFINE AREA BY LIST OF LINES

LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)

AREA NUMBER = 17

DEFINE AREA BY LIST OF LINES

LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)

AREA NUMBER = 18

DEFINE AREA BY LIST OF LINES

LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)

AREA NUMBER = 19

DEFINE AREA BY LIST OF LINES

LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)

AREA NUMBER = 20

DEFINE AREA BY LIST OF LINES

LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)

AREA NUMBER = 21

DEFINE AREA BY LIST OF LINES

LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)

AREA NUMBER = 22

DEFINE AREA BY LIST OF LINES

LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)

AREA NUMBER = 23

DEFINE AREA BY LIST OF LINES

LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)

AREA NUMBER = 24

DEFINE AREA BY LIST OF LINES

LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)

AREA NUMBER = 25

DEFINE AREA BY LIST OF LINES

LINE LIST = 91 32 92 57

(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
bottom guide						
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS	69	17			
LINE NO.= 93	KP1=	69	TAN1=	.0000	-1.0000
	KP2=	17	TAN2=	.0000	1.0000

LINE CONNECTS KEYPOINTS	18	70			
LINE NO.= 94	KP1=	18	TAN1=	.0000	-1.0000
	KP2=	70	TAN2=	.0000	-1.0000

LINE CONNECTS KEYPOINTS 71 69
 LINE NO.= 95 KP1= 71 TAN1= .0000 -1.0000 .0000
 KP2= 69 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 70 72
 LINE NO.= 96 KP1= 70 TAN1= .0000 1.0000 .0000
 KP2= 72 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 73 71
 LINE NO.= 97 KP1= 73 TAN1= 1.0000 .0000 .0000
 KP2= 71 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 72 74
 LINE NO.= 98 KP1= 72 TAN1= -1.0000 .0000 .0000
 KP2= 74 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 20 73
 LINE NO.= 99 KP1= 20 TAN1= 1.0000 .0002 .0000
 KP2= 73 TAN2= -1.0000 -.0002 .0000

LINE CONNECTS KEYPOINTS 74 19
 LINE NO.= 100 KP1= 74 TAN1= -1.0000 .0000 .0000
 KP2= 19 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 75 20
 LINE NO.= 101 KP1= 75 TAN1= -.0002 -1.0000 .0000
 KP2= 20 TAN2= .0002 1.0000 .0000

LINE CONNECTS KEYPOINTS 21 76
 LINE NO.= 102 KP1= 21 TAN1= .0000 1.0000 .0000
 KP2= 76 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 77 75
 LINE NO.= 103 KP1= 77 TAN1= .0000 -1.0000 .0000
 KP2= 75 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 76 78
 LINE NO.= 104 KP1= 76 TAN1= .0000 1.0000 .0000
 KP2= 78 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 79 77
 LINE NO.= 105 KP1= 79 TAN1= 1.0000 .0000 .0000
 KP2= 77 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 78 80
 LINE NO.= 106 KP1= 78 TAN1= -1.0000 .0000 .0000
 KP2= 80 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 23 79
 LINE NO.= 107 KP1= 23 TAN1= 1.0000 .0000 .0000
 KP2= 79 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 80 22
 LINE NO.= 108 KP1= 80 TAN1= -1.0000 .0000 .0000
 KP2= 22 TAN2= 1.0000 .0000 .0000

bottom guide

LINE CONNECTS KEYPOINTS 81 27
 LINE NO.= 109 KP1= 81 TAN1= -1.0000 .0000 .0000
 KP2= 27 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 28 82
 LINE NO.= 110 KP1= 28 TAN1= 1.0000 .0000 .0000
 KP2= 82 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 83 81
 LINE NO.= 111 KP1= 83 TAN1= -1.0000 .0000 .0000
 KP2= 81 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 82 84

LINE NO.= 112	KP1= 82	TAN1= 1.0000	.0000	.0000
	KP2= 84	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 85 83				
LINE NO.= 113	KP1= 85	TAN1= .0000	-1.0000	.0000
	KP2= 83	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 84 86				
LINE NO.= 114	KP1= 84	TAN1= .0000	1.0000	.0000
	KP2= 86	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 30 85				
LINE NO.= 115	KP1= 30	TAN1= .0002	-1.0000	.0000
	KP2= 85	TAN2= -.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS 86 29				
LINE NO.= 116	KP1= 86	TAN1= .0000	1.0000	.0000
	KP2= 29	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 87 30				
LINE NO.= 117	KP1= 87	TAN1= -1.0000	.0002	.0000
	KP2= 30	TAN2= 1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS 31 88				
LINE NO.= 118	KP1= 31	TAN1= 1.0000	.0000	.0000
	KP2= 88	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 89 87				
LINE NO.= 119	KP1= 89	TAN1= -1.0000	.0000	.0000
	KP2= 87	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 88 90				
LINE NO.= 120	KP1= 88	TAN1= 1.0000	.0000	.0000
	KP2= 90	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 91 89				
LINE NO.= 121	KP1= 91	TAN1= .0000	-1.0000	.0000
	KP2= 89	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 90 92				
LINE NO.= 122	KP1= 90	TAN1= .0000	1.0000	.0000
	KP2= 92	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 33 91				
LINE NO.= 123	KP1= 33	TAN1= .0000	-1.0000	.0000
	KP2= 91	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 92 32				
LINE NO.= 124	KP1= 92	TAN1= .0000	1.0000	.0000
	KP2= 32	TAN2= .0000	-1.0000	.0000
Guide thickness lines				
LINE CONNECTS KEYPOINTS 69 70				
LINE NO.= 125	KP1= 69	TAN1= -1.0000	.0000	.0000
	KP2= 70	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 71 72				
LINE NO.= 126	KP1= 71	TAN1= -.7071	-.7071	.0000
	KP2= 72	TAN2= .7071	.7071	.0000
LINE CONNECTS KEYPOINTS 73 74				
LINE NO.= 127	KP1= 73	TAN1= .0000	-1.0000	.0000
	KP2= 74	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 75 76				
LINE NO.= 128	KP1= 75	TAN1= -1.0000	.0000	.0000
	KP2= 76	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 77 78				
LINE NO.= 129	KP1= 77	TAN1= -.7071	-.7071	.0000

	KP2=	78	TAN2=	.7071	.7071	.0000
LINE CONNECTS KEYPOINTS		79	80			
LINE NO.= 130	KP1=	79	TAN1=	.0000	-1.0000	.0000
	KP2=	80	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		82	81			
LINE NO.= 131	KP1=	82	TAN1=	.0000	-1.0000	.0000
	KP2=	81	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		84	83			
LINE NO.= 132	KP1=	84	TAN1=	.7071	-.7071	.0000
	KP2=	83	TAN2=	-.7071	.7071	.0000
LINE CONNECTS KEYPOINTS		86	85			
LINE NO.= 133	KP1=	86	TAN1=	1.0000	.0000	.0000
	KP2=	85	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		88	87			
LINE NO.= 134	KP1=	88	TAN1=	.0000	-1.0000	.0000
	KP2=	87	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		90	89			
LINE NO.= 135	KP1=	90	TAN1=	.7071	-.7071	.0000
	KP2=	89	TAN2=	-.7071	.7071	.0000
LINE CONNECTS KEYPOINTS		92	91			
LINE NO.= 136	KP1=	92	TAN1=	1.0000	.0000	.0000
	KP2=	91	TAN2=	-1.0000	.0000	.0000

Guide steel

DEFINE AREA BY LIST OF LINES

LINE LIST = 93 125 94 15
(TRAVERSED IN SAME DIRECTION AS LINE 93)

AREA NUMBER = 27

DEFINE AREA BY LIST OF LINES

LINE LIST = 95 126 96 125
(TRAVERSED IN SAME DIRECTION AS LINE 95)

AREA NUMBER = 28

DEFINE AREA BY LIST OF LINES

LINE LIST = 97 127 98 126
(TRAVERSED IN SAME DIRECTION AS LINE 97)

AREA NUMBER = 29

DEFINE AREA BY LIST OF LINES

LINE LIST = 99 17 100 127
(TRAVERSED IN SAME DIRECTION AS LINE 99)

AREA NUMBER = 30

DEFINE AREA BY LIST OF LINES

LINE LIST = 101 128 102 18
(TRAVERSED IN SAME DIRECTION AS LINE 101)

AREA NUMBER = 31

DEFINE AREA BY LIST OF LINES

LINE LIST = 103 129 104 128
(TRAVERSED IN SAME DIRECTION AS LINE 103)

AREA NUMBER = 32

DEFINE AREA BY LIST OF LINES

LINE LIST = 105 130 106 129
(TRAVERSED IN SAME DIRECTION AS LINE 105)

AREA NUMBER = 33

DEFINE AREA BY LIST OF LINES

LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)

AREA NUMBER = 34

DEFINE AREA BY LIST OF LINES

LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)

AREA NUMBER = 35

DEFINE AREA BY LIST OF LINES

LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)

AREA NUMBER = 36

DEFINE AREA BY LIST OF LINES

LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)

AREA NUMBER = 37

DEFINE AREA BY LIST OF LINES

LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)

AREA NUMBER = 38

DEFINE AREA BY LIST OF LINES

LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)

AREA NUMBER = 39

DEFINE AREA BY LIST OF LINES

LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)

AREA NUMBER = 40

DEFINE AREA BY LIST OF LINES

LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)

AREA NUMBER = 41

DEFINE AREA BY LIST OF LINES

LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)

AREA NUMBER = 42

Guide gaps

DEFINE AREA BY LIST OF LINES

LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)

AREA NUMBER = 43

DEFINE AREA BY LIST OF LINES

LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)

AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 94 X,Y,Z= .100000E-01 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 95 X,Y,Z= .170000 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 96 X,Y,Z= .170000 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 97 X,Y,Z= .135000E-01 .135000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 98 X,Y,Z= .135000E-01 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 99 X,Y,Z= .166500 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 100 X,Y,Z= .166500 .135000E-01 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 93 97
 LINE NO.= 141 KP1= 93 TAN1= -.7071 -.7071 .0000
 KP2= 97 TAN2= .7071 .7071 .0000

LINE CONNECTS KEYPOINTS 94 98
 LINE NO.= 142 KP1= 94 TAN1= -.7071 .7071 .0000
 KP2= 98 TAN2= .7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 100
 LINE NO.= 143 KP1= 96 TAN1= .7071 -.7071 .0000
 KP2= 100 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 95 99
 LINE NO.= 144 KP1= 95 TAN1= .7071 .7071 .0000
 KP2= 99 TAN2= -.7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 93
 LINE NO.= 145 KP1= 96 TAN1= 1.0000 .0000 .0000
 KP2= 93 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 100 97
 LINE NO.= 146 KP1= 100 TAN1= 1.0000 .0000 .0000
 KP2= 97 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 98 99
 LINE NO.= 147 KP1= 98 TAN1= -1.0000 .0000 .0000
 KP2= 99 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 94 95
 LINE NO.= 148 KP1= 94 TAN1= -1.0000 .0000 .0000
 KP2= 95 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 93 94
 LINE NO.= 149 KP1= 93 TAN1= .0000 -1.0000 .0000
 KP2= 94 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 97 98
 LINE NO.= 150 KP1= 97 TAN1= .0000 -1.0000 .0000
 KP2= 98 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 99 100
 LINE NO.= 151 KP1= 99 TAN1= .0000 1.0000 .0000
 KP2= 100 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 95 96
 LINE NO.= 152 KP1= 95 TAN1= .0000 1.0000 .0000
 KP2= 96 TAN2= .0000 -1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES

LINE LIST = 152 144 151 143
(TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES

LINE LIST = 148 142 147 144
(TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES

LINE LIST = 150 146 151 147
(TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55

Set element shapes and sizes for tubes
8x8 mesh in fuel with 2
divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
first fuel, then stainless tubes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
MAXIMUM NODE NUMBER = 81
MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
MAXIMUM NODE NUMBER = 145

MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
(A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290

MAXIMUM ELEMENT NUMBER = 256

(A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 435

MAXIMUM ELEMENT NUMBER = 384

(A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580

MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725

MAXIMUM ELEMENT NUMBER = 640

(A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870

MAXIMUM ELEMENT NUMBER = 768

(A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015

MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160

MAXIMUM ELEMENT NUMBER = 1024

(A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305

MAXIMUM ELEMENT NUMBER = 1152
(A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
MAXIMUM ELEMENT NUMBER = 1280
(A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
MAXIMUM ELEMENT NUMBER = 1536
(A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
MAXIMUM ELEMENT NUMBER = 1792
(A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
MAXIMUM ELEMENT NUMBER = 1920
(A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
MAXIMUM ELEMENT NUMBER = 2176
(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
 MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
 MAXIMUM ELEMENT NUMBER = 2432

(A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
 MAXIMUM ELEMENT NUMBER = 2560

(A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
 MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 66 TO 70 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
 MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
 Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.410 TIME= 15:14:24
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.460 TIME= 15:14:24
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.720 TIME= 15:14:25
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.770 TIME= 15:14:25
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 5 TO 26 IN STEPS OF 1

NUMBER OF AREAS MESHED = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	
NODE 875	USED FOR NODES	3741	
NODE 874	USED FOR NODES	3742	

NODE	873	USED FOR NODES	3743
NODE	1195	USED FOR NODES	1381
NODE	1050	USED FOR NODES	1236
NODE	801	USED FOR NODES	905
NODE	107	USED FOR NODES	3565
NODE	1091	USED FOR NODES	3550
NODE	132	USED FOR NODES	615
NODE	1340	USED FOR NODES	1526
NODE	656	USED FOR NODES	760
NODE	1194	USED FOR NODES	1382
NODE	802	USED FOR NODES	904
NODE	1049	USED FOR NODES	1237
NODE	106	USED FOR NODES	3566
NODE	133	USED FOR NODES	614
NODE	1092	USED FOR NODES	3551
NODE	1339	USED FOR NODES	1527
NODE	657	USED FOR NODES	759
NODE	1048	USED FOR NODES	1238
NODE	134	USED FOR NODES	613
NODE	803	USED FOR NODES	903
NODE	105	USED FOR NODES	3567
NODE	1093	USED FOR NODES	3552
NODE	1193	USED FOR NODES	1383
NODE	658	USED FOR NODES	758
NODE	1338	USED FOR NODES	1528
NODE	104	USED FOR NODES	3568
NODE	1192	USED FOR NODES	1384
NODE	804	USED FOR NODES	902
NODE	135	USED FOR NODES	612
NODE	1047	USED FOR NODES	1239
NODE	1094	USED FOR NODES	3553
NODE	1337	USED FOR NODES	1529
NODE	659	USED FOR NODES	757
NODE	660	USED FOR NODES	756
NODE	1191	USED FOR NODES	1385
NODE	103	USED FOR NODES	3569
NODE	805	USED FOR NODES	901
NODE	1095	USED FOR NODES	3554
NODE	136	USED FOR NODES	611
NODE	1336	USED FOR NODES	1530
NODE	1046	USED FOR NODES	1240
NODE	661	USED FOR NODES	755
NODE	1096	USED FOR NODES	3555
NODE	1190	USED FOR NODES	1386
NODE	102	USED FOR NODES	3570
NODE	806	USED FOR NODES	900
NODE	137	USED FOR NODES	610
NODE	1335	USED FOR NODES	1531
NODE	1045	USED FOR NODES	1241
NODE	662	USED FOR NODES	754
NODE	1097	USED FOR NODES	3556
NODE	138	USED FOR NODES	609
NODE	1044	USED FOR NODES	1242
NODE	1189	USED FOR NODES	1387
NODE	807	USED FOR NODES	899
NODE	101	USED FOR NODES	3571
NODE	1334	USED FOR NODES	1532
NODE	780	USED FOR NODES	1747
NODE	120	USED FOR NODES	151
NODE	119	USED FOR NODES	152
NODE	118	USED FOR NODES	153
NODE	117	USED FOR NODES	154
NODE	923	USED FOR NODES	3210
NODE	1503	USED FOR NODES	3499
NODE	1504	USED FOR NODES	3498
NODE	777	USED FOR NODES	898
NODE	1188	USED FOR NODES	1357
NODE	1358	USED FOR NODES	2184
NODE	1359	USED FOR NODES	2183
NODE	1360	USED FOR NODES	2182

1742 3203
2031 2177

NODE 1361	USED FOR NODES	2181		
NODE 1362	USED FOR NODES	2180		
NODE 1363	USED FOR NODES	2179		
NODE 1364	USED FOR NODES	2178		
NODE 778	USED FOR NODES	1749		
NODE 779	USED FOR NODES	1748		
NODE 1505	USED FOR NODES	3497		
NODE 1506	USED FOR NODES	3496		
NODE 1043	USED FOR NODES	1212	1886	2032
NODE 1213	USED FOR NODES	2039		
NODE 781	USED FOR NODES	1746		
NODE 782	USED FOR NODES	1745		
NODE 783	USED FOR NODES	1744		
NODE 784	USED FOR NODES	1743		
NODE 1214	USED FOR NODES	2038		
NODE 1215	USED FOR NODES	2037		
NODE 1507	USED FOR NODES	3495		
NODE 1508	USED FOR NODES	3494		
NODE 1509	USED FOR NODES	3493		
NODE 1216	USED FOR NODES	2036		
NODE 1217	USED FOR NODES	2035		
NODE 1218	USED FOR NODES	2034		
NODE 635	USED FOR NODES	1602		
NODE 1219	USED FOR NODES	2033		
NODE 1074	USED FOR NODES	1888		
NODE 636	USED FOR NODES	1601		
NODE 637	USED FOR NODES	1600		
NODE 929	USED FOR NODES	3204		
NODE 638	USED FOR NODES	1599		
NODE 100	USED FOR NODES	146	3564	
NODE 639	USED FOR NODES	1598		
NODE 928	USED FOR NODES	3205		
NODE 1333	USED FOR NODES	1502	2176	3468
NODE 1478	USED FOR NODES	3492		
NODE 1067	USED FOR NODES	1887	3548	
NODE 116	USED FOR NODES	147	608	1596
NODE 922	USED FOR NODES	3191		
NODE 924	USED FOR NODES	3209		
NODE 925	USED FOR NODES	3208		
NODE 926	USED FOR NODES	3207		
NODE 927	USED FOR NODES	3206		
NODE 121	USED FOR NODES	150		
NODE 122	USED FOR NODES	149		
NODE 123	USED FOR NODES	148		
NODE 632	USED FOR NODES	753	1597	1741
NODE 1073	USED FOR NODES	1889		
NODE 1072	USED FOR NODES	1890		
NODE 1071	USED FOR NODES	1891		
NODE 1070	USED FOR NODES	1892		
NODE 1069	USED FOR NODES	1893		
NODE 1068	USED FOR NODES	1894		
NODE 634	USED FOR NODES	1603		
NODE 633	USED FOR NODES	1604		
NODE 1961	USED FOR NODES	3590		
NODE 1920	USED FOR NODES	2106		
NODE 1671	USED FOR NODES	1775		
NODE 180	USED FOR NODES	3605		
NODE 2210	USED FOR NODES	3469		
NODE 1816	USED FOR NODES	3234		
NODE 2065	USED FOR NODES	2251		
NODE 221	USED FOR NODES	1630		
NODE 1962	USED FOR NODES	3591		
NODE 179	USED FOR NODES	3606		
NODE 1919	USED FOR NODES	2107		
NODE 2209	USED FOR NODES	3470		
NODE 2064	USED FOR NODES	2252		
NODE 1672	USED FOR NODES	1774		
NODE 222	USED FOR NODES	1629		
NODE 1817	USED FOR NODES	3233		
NODE 1673	USED FOR NODES	1773		

NODE	178	USED FOR NODES	3607		
NODE	223	USED FOR NODES	1628		
NODE	1963	USED FOR NODES	3592		
NODE	1818	USED FOR NODES	3232		
NODE	1918	USED FOR NODES	2108		
NODE	2208	USED FOR NODES	3471		
NODE	2063	USED FOR NODES	2253		
NODE	1917	USED FOR NODES	2109		
NODE	177	USED FOR NODES	3608		
NODE	2207	USED FOR NODES	3472		
NODE	224	USED FOR NODES	1627		
NODE	1674	USED FOR NODES	1772		
NODE	1964	USED FOR NODES	3593		
NODE	1819	USED FOR NODES	3231		
NODE	2062	USED FOR NODES	2254		
NODE	1916	USED FOR NODES	2110		
NODE	176	USED FOR NODES	3609		
NODE	2206	USED FOR NODES	3473		
NODE	2061	USED FOR NODES	2255		
NODE	225	USED FOR NODES	1626		
NODE	1965	USED FOR NODES	3594		
NODE	1675	USED FOR NODES	1771		
NODE	1820	USED FOR NODES	3230		
NODE	1966	USED FOR NODES	3595		
NODE	175	USED FOR NODES	3610		
NODE	1821	USED FOR NODES	3229		
NODE	2205	USED FOR NODES	3474		
NODE	1915	USED FOR NODES	2111		
NODE	226	USED FOR NODES	1625		
NODE	1676	USED FOR NODES	1770		
NODE	2060	USED FOR NODES	2256		
NODE	1822	USED FOR NODES	3228		
NODE	174	USED FOR NODES	3611		
NODE	1967	USED FOR NODES	3596		
NODE	2204	USED FOR NODES	3475		
NODE	1914	USED FOR NODES	2112		
NODE	227	USED FOR NODES	1624		
NODE	2059	USED FOR NODES	2257		
NODE	1677	USED FOR NODES	1769		
NODE	199	USED FOR NODES	298		
NODE	198	USED FOR NODES	299		
NODE	1792	USED FOR NODES	2467	3227	
NODE	1793	USED FOR NODES	2474		
NODE	1939	USED FOR NODES	2618		
NODE	1938	USED FOR NODES	2619		
NODE	1794	USED FOR NODES	2473		
NODE	1913	USED FOR NODES	2082	2611	2757
NODE	1795	USED FOR NODES	2472		
NODE	1796	USED FOR NODES	2471		
NODE	1797	USED FOR NODES	2470		
NODE	1798	USED FOR NODES	2469		
NODE	1799	USED FOR NODES	2468		
NODE	2203	USED FOR NODES	2901	3442	
NODE	2058	USED FOR NODES	2227	2756	2902
NODE	2234	USED FOR NODES	2903		
NODE	173	USED FOR NODES	291	3604	
NODE	2083	USED FOR NODES	2764		
NODE	2233	USED FOR NODES	2904		
NODE	2232	USED FOR NODES	2905		
NODE	2231	USED FOR NODES	2906		
NODE	2230	USED FOR NODES	2907		
NODE	2229	USED FOR NODES	2908		
NODE	2084	USED FOR NODES	2763		
NODE	1937	USED FOR NODES	2612	3588	
NODE	2228	USED FOR NODES	2909		
NODE	1940	USED FOR NODES	2617		
NODE	1941	USED FOR NODES	2616		
NODE	1942	USED FOR NODES	2615		
NODE	2085	USED FOR NODES	2762		
NODE	1943	USED FOR NODES	2614		

NODE	2086	USED	FOR	NODES	2761		
NODE	1944	USED	FOR	NODES	2613		
NODE	2087	USED	FOR	NODES	2760		
NODE	197	USED	FOR	NODES	292	1623	2321
NODE	2088	USED	FOR	NODES	2759		
NODE	200	USED	FOR	NODES	297		
NODE	201	USED	FOR	NODES	296		
NODE	202	USED	FOR	NODES	295		
NODE	203	USED	FOR	NODES	294		
NODE	1647	USED	FOR	NODES	1768	2322	2466
NODE	1648	USED	FOR	NODES	2329		
NODE	1649	USED	FOR	NODES	2328		
NODE	204	USED	FOR	NODES	293		
NODE	1654	USED	FOR	NODES	2323		
NODE	1653	USED	FOR	NODES	2324		
NODE	1652	USED	FOR	NODES	2325		
NODE	1651	USED	FOR	NODES	2326		
NODE	2089	USED	FOR	NODES	2758		
NODE	1650	USED	FOR	NODES	2327		
NODE	325	USED	FOR	NODES	3645		
NODE	2686	USED	FOR	NODES	3630		
NODE	2790	USED	FOR	NODES	2976		
NODE	2541	USED	FOR	NODES	3258		
NODE	366	USED	FOR	NODES	2355		
NODE	2396	USED	FOR	NODES	2500		
NODE	2935	USED	FOR	NODES	3443		
NODE	2645	USED	FOR	NODES	2831		
NODE	2789	USED	FOR	NODES	2977		
NODE	324	USED	FOR	NODES	3646		
NODE	2542	USED	FOR	NODES	3257		
NODE	367	USED	FOR	NODES	2354		
NODE	2644	USED	FOR	NODES	2832		
NODE	2397	USED	FOR	NODES	2499		
NODE	2934	USED	FOR	NODES	3444		
NODE	2687	USED	FOR	NODES	3631		
NODE	323	USED	FOR	NODES	3647		
NODE	2398	USED	FOR	NODES	2498		
NODE	2643	USED	FOR	NODES	2833		
NODE	2688	USED	FOR	NODES	3632		
NODE	2788	USED	FOR	NODES	2978		
NODE	2543	USED	FOR	NODES	3256		
NODE	368	USED	FOR	NODES	2353		
NODE	2933	USED	FOR	NODES	3445		
NODE	2642	USED	FOR	NODES	2834		
NODE	322	USED	FOR	NODES	3648		
NODE	2787	USED	FOR	NODES	2979		
NODE	2399	USED	FOR	NODES	2497		
NODE	2544	USED	FOR	NODES	3255		
NODE	369	USED	FOR	NODES	2352		
NODE	2932	USED	FOR	NODES	3446		
NODE	2689	USED	FOR	NODES	3633		
NODE	2641	USED	FOR	NODES	2835		
NODE	321	USED	FOR	NODES	3649		
NODE	2786	USED	FOR	NODES	2980		
NODE	2400	USED	FOR	NODES	2496		
NODE	2931	USED	FOR	NODES	3447		
NODE	2545	USED	FOR	NODES	3254		
NODE	370	USED	FOR	NODES	2351		
NODE	2690	USED	FOR	NODES	3634		
NODE	320	USED	FOR	NODES	3650		
NODE	2785	USED	FOR	NODES	2981		
NODE	2401	USED	FOR	NODES	2495		
NODE	2640	USED	FOR	NODES	2836		
NODE	2546	USED	FOR	NODES	3253		
NODE	371	USED	FOR	NODES	2350		
NODE	2930	USED	FOR	NODES	3448		
NODE	2691	USED	FOR	NODES	3635		
NODE	319	USED	FOR	NODES	3651		
NODE	2692	USED	FOR	NODES	3636		
NODE	372	USED	FOR	NODES	2349		

NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		
NODE	3077	USED FOR NODES	3374		
NODE	514	USED FOR NODES	3329		

NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.450 TIME= 15:14:29
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 16.170 TIME= 15:14:29
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 16.180 TIME= 15:14:29
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38	USED FOR KEYPOINT(S)	150	
KEYPOINT	40	USED FOR KEYPOINT(S)	93	
KEYPOINT	41	USED FOR KEYPOINT(S)	155	198
KEYPOINT	43	USED FOR KEYPOINT(S)	96	101
KEYPOINT	44	USED FOR KEYPOINT(S)	203	238
KEYPOINT	46	USED FOR KEYPOINT(S)	105	109
KEYPOINT	47	USED FOR KEYPOINT(S)	243	262
KEYPOINT	49	USED FOR KEYPOINT(S)	113	117
KEYPOINT	50	USED FOR KEYPOINT(S)	267	
KEYPOINT	52	USED FOR KEYPOINT(S)	121	
KEYPOINT	54	USED FOR KEYPOINT(S)	142	
KEYPOINT	56	USED FOR KEYPOINT(S)	134	141
KEYPOINT	58	USED FOR KEYPOINT(S)	126	133
KEYPOINT	60	USED FOR KEYPOINT(S)	94	125
KEYPOINT	62	USED FOR KEYPOINT(S)	149	158
KEYPOINT	64	USED FOR KEYPOINT(S)	157	166
KEYPOINT	66	USED FOR KEYPOINT(S)	165	174
KEYPOINT	68	USED FOR KEYPOINT(S)	173	
KEYPOINT	69	USED FOR KEYPOINT(S)	147	
KEYPOINT	71	USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73	USED FOR KEYPOINT(S)	195	230
KEYPOINT	75	USED FOR KEYPOINT(S)	227	233
KEYPOINT	77	USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79	USED FOR KEYPOINT(S)	123	
KEYPOINT	81	USED FOR KEYPOINT(S)	265	
KEYPOINT	83	USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85	USED FOR KEYPOINT(S)	249	259
KEYPOINT	87	USED FOR KEYPOINT(S)	217	253
KEYPOINT	89	USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91	USED FOR KEYPOINT(S)	177	
KEYPOINT	95	USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107	USED FOR KEYPOINT(S)	110	185 221
KEYPOINT	131	USED FOR KEYPOINT(S)	137	182 189
KEYPOINT	153	USED FOR KEYPOINT(S)	163	197 206

KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254
LINE	58 USED FOR LINE(S)	235		
LINE	60 USED FOR LINE(S)	145		
LINE	61 USED FOR LINE(S)	307		
LINE	63 USED FOR LINE(S)	157		
LINE	64 USED FOR LINE(S)	367		
LINE	66 USED FOR LINE(S)	169		
LINE	67 USED FOR LINE(S)	403		
LINE	69 USED FOR LINE(S)	181		
LINE	76 USED FOR LINE(S)	213		
LINE	78 USED FOR LINE(S)	201		
LINE	80 USED FOR LINE(S)	189		
LINE	82 USED FOR LINE(S)	149		
LINE	84 USED FOR LINE(S)	225		
LINE	86 USED FOR LINE(S)	237		
LINE	88 USED FOR LINE(S)	249		
LINE	90 USED FOR LINE(S)	261		
LINE	95 USED FOR LINE(S)	220		
LINE	97 USED FOR LINE(S)	295		
LINE	103 USED FOR LINE(S)	340		
LINE	105 USED FOR LINE(S)	187		
LINE	111 USED FOR LINE(S)	397		
LINE	113 USED FOR LINE(S)	376		
LINE	119 USED FOR LINE(S)	325		
LINE	121 USED FOR LINE(S)	268		
LINE	137 USED FOR LINE(S)	223		

*** WARNING ***

Due to merge, line 137 is now meshed.

LINE 138 USED FOR LINE(S) 184

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 138 is now meshed.

LINE 139 USED FOR LINE(S) 400

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 139 is now meshed.

LINE 140 USED FOR LINE(S) 265

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 140 is now meshed.

LINE 148 USED FOR LINE(S) 193

LINE 152 USED FOR LINE(S) 153

LINE 160 USED FOR LINE(S) 165

LINE 163 USED FOR LINE(S) 277

LINE 172 USED FOR LINE(S) 177

LINE 175 USED FOR LINE(S) 337

LINE 196 USED FOR LINE(S) 273

LINE 199 USED FOR LINE(S) 205

LINE 208 USED FOR LINE(S) 285

LINE 211 USED FOR LINE(S) 217

LINE 229 USED FOR LINE(S) 247

LINE 232 USED FOR LINE(S) 297

LINE 241 USED FOR LINE(S) 259

LINE 244 USED FOR LINE(S) 309

LINE 253 USED FOR LINE(S) 271

LINE 256 USED FOR LINE(S) 321

LINE 280 USED FOR LINE(S) 333

LINE 283 USED FOR LINE(S) 289

LINE 292 USED FOR LINE(S) 345

LINE 301 USED FOR LINE(S) 319

LINE 304 USED FOR LINE(S) 357

LINE 313 USED FOR LINE(S) 331

LINE 316 USED FOR LINE(S) 369

LINE 328 USED FOR LINE(S) 381

LINE 343 USED FOR LINE(S) 349

LINE 361 USED FOR LINE(S) 379

CP= 16.640 TIME= 15:14:30

LINE 364 USED FOR LINE(S) 393
 LINE 373 USED FOR LINE(S) 391

Create mesh in UCF inner shell
 (L's 105,108 ????)

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 22 STEP 1

10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 32 STEP 1

10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING *** CP= 17.760 TIME= 15:14:31
 Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE *** CP= 17.760 TIME= 15:14:31
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3327	3328	3329	3330	3331	3332	3333	3334	3335	3354
3355	3356	3357	3358	3359	3360	3361	3362	3363	3364
3365	3366	3367	3368	3402	3403	3404	3417	3418	3419
3453	3454	3455	3456	3457	3458	3459	3460	3461	3462
3463	3464	3465	3466	3467	3486	3487	3488	3489	3490
3491	3492	3493	3494						

*** WARNING *** CP= 18.590 TIME= 15:14:32
 Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE *** CP= 18.590 TIME= 15:14:32
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4375
 MAXIMUM ELEMENT NUMBER = 3680
 Delete concatenated lines
 (L's freed up 105,108 ????)
 LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 6 TO 7 STEP 1
 2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1
 350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 15

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4738
 MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 22.120 TIME= 15:14:40
 Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 22.180 TIME= 15:14:40
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 22.180 TIME= 15:14:40
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50 IN STEPS OF	1
** AREA	43 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	44 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **
** AREA	45 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	46 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 27.470 TIME= 15:14:50
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 27.510 TIME= 15:14:50
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 27.520 TIME= 15:14:50
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES 14 TO 16 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4596

GENERATE NODES AND ELEMENTS

ON LINES 19 TO 21 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4620

GENERATE NODES AND ELEMENTS

ON LINES 24 TO 26 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4644

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.900

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model
View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=
44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.

DISPLAY TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 15:15:00 JUN 18, 1995 CP= 32.850

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=

IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM

260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD.

NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING ***

CP= 33.080 TIME= 15:15:00

No space node defined. An enclosed system need not have a space node.

For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=

IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSLE COMMAND.

***** ROUTINE COMPLETED ***** CP = 44.440

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:15:24 JUN 18, 1995 CP= 44.440
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES

*** NOTE *** CP= 44.490 TIME= 15:15:24
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.490 TIME= 15:15:24
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.500 TIME= 15:15:24
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.510 TIME= 15:15:24
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.510 TIME= 15:15:24
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.520 TIME= 15:15:24
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.520 TIME= 15:15:24
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.530 TIME= 15:15:24
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.530 TIME= 15:15:24
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 74 because area 17 is meshed. Only

elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 92 because area 26 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 93 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 94 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 96 because area 28 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 98 because area 29 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.560 TIME= 15:15:24
Nodes cannot be cleared from line 100 because area 30 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.560 TIME= 15:15:24
Nodes cannot be cleared from line 102 because area 31 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.570 TIME= 15:15:24
Nodes cannot be cleared from line 104 because area 32 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.570 TIME= 15:15:24
Nodes cannot be cleared from line 106 because area 33 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 107 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 108 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 109 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 110 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.590 TIME= 15:15:24
Nodes cannot be cleared from line 112 because area 36 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.590 TIME= 15:15:24
Nodes cannot be cleared from line 114 because area 37 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.600 TIME= 15:15:24
Nodes cannot be cleared from line 116 because area 38 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.600 TIME= 15:15:24
Nodes cannot be cleared from line 118 because area 39 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 120 because area 40 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 122 because area 41 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 123 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 124 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 137 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 138 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 139 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.630 TIME= 15:15:24
Nodes cannot be cleared from line 140 because area 50 is meshed. Only
elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 44.640

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 44.650 TIME= 15:15:24
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO= 273.150

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

```
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1409103 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.
SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.
SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.
ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .10000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 45.890 TIME= 15:15:27
All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:15:27 JUN 18, 1995 CP= 45.900
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
```

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM.TEMP
 ANALYSIS TYPE.TRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO.273.15
 NEWTON-RAPHSON OPTION.PROGRAM CHOSEN

*** NOTE *** CP= 46.840 TIME= 15:15:29
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 47.230 TIME= 15:15:29
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER.1
 TIME AT END OF THE LOAD STEP.1.0000E-05
 AUTOMATIC TIME STEPPING.ON
 INITIAL NUMBER OF SUBSTEPS.0
 MAXIMUM NUMBER OF SUBSTEPS.0
 MINIMUM NUMBER OF SUBSTEPS.1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS.25
 STEP CHANGE BOUNDARY CONDITIONS.NO
 TRANSIENT (INERTIA) EFFECTS.OFF
 TERMINATE ANALYSIS IF NOT CONVERGED.YES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLS.NO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4045.5

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .33687	IXX = 641.6	IXX = 641.6
YC = .11253E-10	IYY = 641.6	IYY = 182.5
ZC = .00000E+00	IZZ = 1283.	IZZ = 824.0
	IXY = .1364E-12	IXY = .1534E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4045.51

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 64.980 TIME= 15:16:06
 Coefficient ratio exceeds 1.0e8. - Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	12.010	.003
18	1	MATRIX50	.090	.090

Time at end of element matrix formulation CP= 64.98.
HT FLOW CONVERGENCE VALUE= 9968. CRITERION= 9.968

Estimated number of active DOF= 4513.
Maximum wavefront= 311.

Time at end of matrix triangularization CP= 83.98.
Equation solver maximum pivot= 835.577491 at node 3669 TEMP.
Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 237.7
HT FLOW CONVERGENCE VALUE= 108.3 CRITERION= .4238
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -48.29
HT FLOW CONVERGENCE VALUE= 10.17 CRITERION= .4119
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 5.127
HT FLOW CONVERGENCE VALUE= .6486 CRITERION= .4092
EQUIL ITER 4 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3757
HT FLOW CONVERGENCE VALUE= .3372E-01 CRITERION= .4091 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	6.550	.001
18	1	MATRIX50	.120	.120

1	4572	PLANE55	.970	.000
18	1	MATRIX50	.000	.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.970	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4
*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS

ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 4513
R.M.S. WAVEFRONT SIZE = 152.0

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44j.emat
2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44j.esav
5.219 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44j.tri
.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44j.dsub
2.484 MB WRITTEN ON RESULTS FILE: ucf44j.rth
Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121. NODES (OF 4634 DEFINED) SELECTED FROM
2. SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.961 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.991 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.059 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 213.010 TIME= 15:19:03
This load step will be a static (steady-state) step.

*** NOTE *** CP= 213.420 TIME= 15:19:04
The step data was checked and warning messages were found.
Please review output or errors file (ucf44j.err) for these warning
messages.

*** NOTE *** CP= 213.420 TIME= 15:19:04
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:19:04 JUN 18, 1995 CP= 213.420
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 0
MAXIMUM NUMBER OF SUBSTEPS 0
MINIMUM NUMBER OF SUBSTEPS 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS OFF
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1633E+05 CRITERION= 16.34
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 43.10
HT FLOW CONVERGENCE VALUE= 33.78 CRITERION= .4039
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.21
HT FLOW CONVERGENCE VALUE= 3.154 CRITERION= .4000
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.420
HT FLOW CONVERGENCE VALUE= .1866 CRITERION= .3993 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3
*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7
*** TIME = .20000E-05 TIME INC = .10000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP
Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS
FOR AUTOMATIC TIME STEPPING:
USE 40 SUBSTEPS AS A MAXIMUM
USE 5 SUBSTEPS AS A MINIMUM
USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP
AS THE STARTING TIME STEP SIZE.
Begin Transient
Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM

22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.961 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.991 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.059 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 323.660 TIME= 15:20:59
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:20:59 JUN 18, 1995 CP= 323.660
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 3
TIME AT END OF THE LOAD STEP. 31.558
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1866 CRITERION= .3993
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2100E-03

HT FLOW CONVERGENCE VALUE= .6066E-05 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 1 COMPLETED. CUM ITER = 8
 *** TIME = .788942 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1933 OSCILLATION LIMIT = .1525
 *** AUTO STEP TIME: NEXT TIME INC = .78894 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3529 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2750E-03
 HT FLOW CONVERGENCE VALUE= .8856E-05 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
 *** TIME = 1.57788 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1129 OSCILLATION LIMIT = .8906E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3321 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3714E-03
 HT FLOW CONVERGENCE VALUE= .1636E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
 *** TIME = 3.94470 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .3815E-01 OSCILLATION LIMIT = .9030E-01
 *** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3127 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2235E-03
 HT FLOW CONVERGENCE VALUE= .3505E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
 *** TIME = 10.2562 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .6284E-02 OSCILLATION LIMIT = .3966E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3038 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1649E-03
 HT FLOW CONVERGENCE VALUE= .3172E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
 *** TIME = 16.5677 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .2165E-02 OSCILLATION LIMIT = .1366E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3000 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1646E-03
 HT FLOW CONVERGENCE VALUE= .3083E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
 *** TIME = 22.8793 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1942E-02 OSCILLATION LIMIT = .1226E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .2966 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1644E-03
 HT FLOW CONVERGENCE VALUE= .3020E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
 *** TIME = 29.1908 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1831E-02 OSCILLATION LIMIT = .1156E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2934 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6156E-04
 HT FLOW CONVERGENCE VALUE= .1121E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
 *** TIME = 31.5576 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .1780E-02 OSCILLATION LIMIT = .4213E-02

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:30:08 JUN 18, 1995 CP= 774.860
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 258.3 CRITERION= .4756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7356
 HT FLOW CONVERGENCE VALUE= .4290 CRITERION= .3977
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8267E-01
 HT FLOW CONVERGENCE VALUE= .2891E-01 CRITERION= .3977 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1098E-04 OSCILLATION LIMIT = .8659
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 258.7 CRITERION= .4744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7358
 HT FLOW CONVERGENCE VALUE= .5117 CRITERION= .3982
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1117
 HT FLOW CONVERGENCE VALUE= .3111E-01 CRITERION= .3983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9771E-06 OSCILLATION LIMIT = .7709E-01
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 774.9 CRITERION= .8713
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.207
 HT FLOW CONVERGENCE VALUE= 1.466 CRITERION= .3971
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4222
 HT FLOW CONVERGENCE VALUE= .1216 CRITERION= .3971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1509E-05 OSCILLATION LIMIT = .3572
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 775.2 CRITERION= .8708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.207
 HT FLOW CONVERGENCE VALUE= 1.498 CRITERION= .3971
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299
 HT FLOW CONVERGENCE VALUE= .1225 CRITERION= .3971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 631184. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1247E-05 OSCILLATION LIMIT = .2951
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 INCREASED (FACTOR = 1.6941)

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.818 CRITERION= .3958
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7860
 HT FLOW CONVERGENCE VALUE= .2265 CRITERION= .3957 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .103215E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1390E-05 OSCILLATION LIMIT = .5573
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.768 CRITERION= .3954
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7898

HT FLOW CONVERGENCE VALUE= .2279 CRITERION= .3953 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .143311E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1280E-05 OSCILLATION LIMIT = .5133
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.906 CRITERION= .3939
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7874
 HT FLOW CONVERGENCE VALUE= .2290 CRITERION= .3938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .183407E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1312E-05 OSCILLATION LIMIT = .5259
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.943 CRITERION= .3935
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7845
 HT FLOW CONVERGENCE VALUE= .2298 CRITERION= .3934 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .223503E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1267E-05 OSCILLATION LIMIT = .5082
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1311. CRITERION= 1.369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.816 CRITERION= .3920
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7810
 HT FLOW CONVERGENCE VALUE= .2333 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .263600E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1293E-05 OSCILLATION LIMIT = .5186
 *** AUTO TIME STEP: NEXT TIME INC = .25990E+06 DECREASED (FACTOR = .6482)

HT FLOW CONVERGENCE VALUE= 850.0 CRITERION= .9358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.423
 HT FLOW CONVERGENCE VALUE= 2.027 CRITERION= .3919
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4803
 HT FLOW CONVERGENCE VALUE= .1474 CRITERION= .3919 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 10 COMPLETED. CUM ITER = 35
 *** TIME = .289589E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1212E-05 OSCILLATION LIMIT = .3150
 *** AUTO STEP TIME: NEXT TIME INC = .25990E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 849.4 CRITERION= .9355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.423
 HT FLOW CONVERGENCE VALUE= 2.177 CRITERION= .3908
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4773
 HT FLOW CONVERGENCE VALUE= .1478 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 11 COMPLETED. CUM ITER = 37
 *** TIME = .315579E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1317E-05 OSCILLATION LIMIT = .3422

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:45:44 JUN 18, 1995 CP= 1675.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

HT FLOW CONVERGENCE VALUE= 168.1 CRITERION= .4254
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7726
 HT FLOW CONVERGENCE VALUE= .4975 CRITERION= .3925
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1318
 HT FLOW CONVERGENCE VALUE= .3339E-01 CRITERION= .3926 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 39
 *** TIME = .341569E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1907E-05 OSCILLATION LIMIT = .4956
 *** AUTO STEP TIME: NEXT TIME INC = .25990E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.4 CRITERION= .4268
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4443
 HT FLOW CONVERGENCE VALUE= .3718 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 40
 *** TIME = .367559E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .9107E-05 OSCILLATION LIMIT = 2.367
 *** AUTO TIME STEP: NEXT TIME INC = 86633. DECREASED (FACTOR = .3333).

HT FLOW CONVERGENCE VALUE= 56.35 CRITERION= .3947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2204
 HT FLOW CONVERGENCE VALUE= .1591 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 41
 *** TIME = .376222E+07 TIME INC = 86632.5
 *** RESPONSE EIGENVALUE = .6377E-05 OSCILLATION LIMIT = .5525
 *** AUTO STEP TIME: NEXT TIME INC = 86633. UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.60 CRITERION= .3960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1481
 HT FLOW CONVERGENCE VALUE= .1183 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 42
 *** TIME = .384885E+07 TIME INC = 86632.5
 *** RESPONSE EIGENVALUE = .2604E-04 OSCILLATION LIMIT = 2.255
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .9107)

HT FLOW CONVERGENCE VALUE= 51.33 CRITERION= .3941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1500
 HT FLOW CONVERGENCE VALUE= .1324 CRITERION= .3918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 43
 *** TIME = .392775E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9282E-05 OSCILLATION LIMIT = .7323
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.61 CRITERION= .3950
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1158 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 44
 *** TIME = .400664E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1324E-04 OSCILLATION LIMIT = 1.045
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3940
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1470
 HT FLOW CONVERGENCE VALUE= .1300 CRITERION= .3916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 45
 *** TIME = .408553E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9291E-05 OSCILLATION LIMIT = .7330
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.62 CRITERION= .3949
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1165 CRITERION= .3906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 8 COMPLETED. CUM ITER = 46
 *** TIME = .416443E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = .8874
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3939
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1454
 HT FLOW CONVERGENCE VALUE= .1287 CRITERION= .3915 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 9 COMPLETED. CUM ITER = 47
 *** TIME = .424332E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8561E-05 OSCILLATION LIMIT = .6754
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.62 CRITERION= .3947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1171 CRITERION= .3905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 10 COMPLETED. CUM ITER = 48
 *** TIME = .432222E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1007E-04 OSCILLATION LIMIT = .7945
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1443
 HT FLOW CONVERGENCE VALUE= .1282 CRITERION= .3913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 11 COMPLETED. CUM ITER = 49
 *** TIME = .440111E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7993E-05 OSCILLATION LIMIT = .6306
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.63 CRITERION= .3946
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1179 CRITERION= .3903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 12 COMPLETED. CUM ITER = 50
 *** TIME = .448000E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9191E-05 OSCILLATION LIMIT = .7251
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3937
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1439
 HT FLOW CONVERGENCE VALUE= .1286 CRITERION= .3912 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 13 COMPLETED. CUM ITER = 51
 *** TIME = .455890E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7511E-05 OSCILLATION LIMIT = .5926
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.64 CRITERION= .3945
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1188 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 14 COMPLETED. CUM ITER = 52
 *** TIME = .463779E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8497E-05 OSCILLATION LIMIT = .6704
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3936
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1436
 HT FLOW CONVERGENCE VALUE= .1262 CRITERION= .3910 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 15 COMPLETED. CUM ITER = 53
 *** TIME = .471669E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7089E-05 OSCILLATION LIMIT = .5593
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.64 CRITERION= .3943
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349

HT FLOW CONVERGENCE VALUE= .1126 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 16 COMPLETED. CUM ITER = 54
 *** TIME = .479558E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7934E-05 OSCILLATION LIMIT = .6260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3935
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1433
 HT FLOW CONVERGENCE VALUE= .1185 CRITERION= .3909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 17 COMPLETED. CUM ITER = 55
 *** TIME = .487447E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6705E-05 OSCILLATION LIMIT = .5290
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.65 CRITERION= .3942
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1100 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 18 COMPLETED. CUM ITER = 56
 *** TIME = .495337E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7481E-05 OSCILLATION LIMIT = .5902
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1431
 HT FLOW CONVERGENCE VALUE= .1167 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 19 COMPLETED. CUM ITER = 57
 *** TIME = .503226E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6358E-05 OSCILLATION LIMIT = .5016
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.66 CRITERION= .3941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1083 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 20 COMPLETED. CUM ITER = 58
 *** TIME = .511116E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7073E-05 OSCILLATION LIMIT = .5580
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1428
 HT FLOW CONVERGENCE VALUE= .1145 CRITERION= .3906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 21 COMPLETED. CUM ITER = 59
 *** TIME = .519005E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6053E-05 OSCILLATION LIMIT = .4775
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.67 CRITERION= .3939
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1071 CRITERION= .3898 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 22 COMPLETED. CUM ITER = 60
 *** TIME = .526894E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6712E-05 OSCILLATION LIMIT = .5295
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3931
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1426
 HT FLOW CONVERGENCE VALUE= .1131 CRITERION= .3905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 23 COMPLETED. CUM ITER = 61
 *** TIME = .534784E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5761E-05 OSCILLATION LIMIT = .4545
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.68 CRITERION= .3938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1045 CRITERION= .3897 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 62
 *** TIME = .542673E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6406E-05 OSCILLATION LIMIT = .5054
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.33 CRITERION= .3930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1424
 HT FLOW CONVERGENCE VALUE= .1097 CRITERION= .3904 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 63
 *** TIME = .550563E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5505E-05 OSCILLATION LIMIT = .4343
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.70 CRITERION= .3937
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .3896 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 64
 *** TIME = .558452E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6132E-05 OSCILLATION LIMIT = .4837
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.34 CRITERION= .3929
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1422
 HT FLOW CONVERGENCE VALUE= .1078 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 65
 *** TIME = .566341E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5263E-05 OSCILLATION LIMIT = .4152
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.72 CRITERION= .3935
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .3894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 66
 *** TIME = .574231E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5878E-05 OSCILLATION LIMIT = .4637
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.35 CRITERION= .3928
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1420
 HT FLOW CONVERGENCE VALUE= .1053 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 67
 *** TIME = .582120E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5038E-05 OSCILLATION LIMIT = .3974
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.73 CRITERION= .3934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .9901E-01 CRITERION= .3893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 68
 *** TIME = .590010E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5659E-05 OSCILLATION LIMIT = .4465
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.36 CRITERION= .3927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1418
 HT FLOW CONVERGENCE VALUE= .1056 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 69
 *** TIME = .597899E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4831E-05 OSCILLATION LIMIT = .3812

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*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 50.75      CRITERION= .3933
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
  HT FLOW CONVERGENCE VALUE= .9895E-01 CRITERION= .3892    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 32 COMPLETED. CUM ITER = 70
*** TIME = .605788E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5443E-05 OSCILLATION LIMIT = .4295
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 51.37      CRITERION= .3926
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1416
  HT FLOW CONVERGENCE VALUE= .1039      CRITERION= .3898    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 33 COMPLETED. CUM ITER = 71
*** TIME = .613678E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4653E-05 OSCILLATION LIMIT = .3671
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 50.77      CRITERION= .3932
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
  HT FLOW CONVERGENCE VALUE= .9875E-01 CRITERION= .3891    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 34 COMPLETED. CUM ITER = 72
*** TIME = .621567E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5249E-05 OSCILLATION LIMIT = .4141
*** AUTO STEP TIME: NEXT TIME INC = 47940.      DECREASED (FACTOR = .6076)

  HT FLOW CONVERGENCE VALUE= 31.36      CRITERION= .3903
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8854E-01
  HT FLOW CONVERGENCE VALUE= .6275E-01 CRITERION= .3897    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 35 COMPLETED. CUM ITER = 73
*** TIME = .626361E+07 TIME INC = 47939.8
*** RESPONSE EIGENVALUE = .9949E-05 OSCILLATION LIMIT = .4770
*** AUTO STEP TIME: NEXT TIME INC = 47940.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 30.76      CRITERION= .3909
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8195E-01
  HT FLOW CONVERGENCE VALUE= .5818E-01 CRITERION= .3890    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 36 COMPLETED. CUM ITER = 74
*** TIME = .631155E+07 TIME INC = 47939.8
*** RESPONSE EIGENVALUE = .1131E-04 OSCILLATION LIMIT = .5420

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX 16:24:21 JUN 18, 1995 CP= 3709.400
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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  HT FLOW CONVERGENCE VALUE= 31.90      CRITERION= .3903
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9013E-01
  HT FLOW CONVERGENCE VALUE= .6901E-01 CRITERION= .3897    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 75
*** TIME = .639045E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6419E-05 OSCILLATION LIMIT = .5064
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 31.28      CRITERION= .3910
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
  HT FLOW CONVERGENCE VALUE= .5787E-01 CRITERION= .3889    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 76

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*** TIME = .646934E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1309E-04    OSCILLATION LIMIT = 1.033
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.91    CRITERION= .3902
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8953E-01
    HT FLOW CONVERGENCE VALUE= .6453E-01    CRITERION= .3896    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 3 COMPLETED.    CUM ITER = 77
*** TIME = .654823E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9145E-05    OSCILLATION LIMIT = .7215
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.29    CRITERION= .3908
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5890E-01    CRITERION= .3888    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 4 COMPLETED.    CUM ITER = 78
*** TIME = .662713E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1092E-04    OSCILLATION LIMIT = .8614
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.92    CRITERION= .3901
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8934E-01
    HT FLOW CONVERGENCE VALUE= .6428E-01    CRITERION= .3895    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 5 COMPLETED.    CUM ITER = 79
*** TIME = .670602E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8867E-05    OSCILLATION LIMIT = .6996
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.30    CRITERION= .3907
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5903E-01    CRITERION= .3887    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 6 COMPLETED.    CUM ITER = 80
*** TIME = .678492E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1042E-04    OSCILLATION LIMIT = .8222
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.92    CRITERION= .3900
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8916E-01
    HT FLOW CONVERGENCE VALUE= .6406E-01    CRITERION= .3893    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 7 COMPLETED.    CUM ITER = 81
*** TIME = .686381E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8542E-05    OSCILLATION LIMIT = .6739
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.31    CRITERION= .3906
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5916E-01    CRITERION= .3886    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 8 COMPLETED.    CUM ITER = 82
*** TIME = .694270E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9951E-05    OSCILLATION LIMIT = .7851
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.93    CRITERION= .3899
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8898E-01
    HT FLOW CONVERGENCE VALUE= .6390E-01    CRITERION= .3892    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 9 COMPLETED.    CUM ITER = 83
*** TIME = .702160E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8240E-05    OSCILLATION LIMIT = .6501
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.33    CRITERION= .3905
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5927E-01    CRITERION= .3885    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 10 COMPLETED. CUM ITER = 84
*** TIME = .710049E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9528E-05 OSCILLATION LIMIT = .7517
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.93 CRITERION= .3898
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8881E-01
HT FLOW CONVERGENCE VALUE= .6376E-01 CRITERION= .3891 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 11 COMPLETED. CUM ITER = 85
*** TIME = .717939E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7954E-05 OSCILLATION LIMIT = .6275
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.34 CRITERION= .3904
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5935E-01 CRITERION= .3884 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 12 COMPLETED. CUM ITER = 86
*** TIME = .725828E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9143E-05 OSCILLATION LIMIT = .7213
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .3897
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8865E-01
HT FLOW CONVERGENCE VALUE= .6361E-01 CRITERION= .3890 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 13 COMPLETED. CUM ITER = 87
*** TIME = .733717E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7682E-05 OSCILLATION LIMIT = .6061
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.35 CRITERION= .3903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5940E-01 CRITERION= .3883 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 14 COMPLETED. CUM ITER = 88
*** TIME = .741607E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8789E-05 OSCILLATION LIMIT = .6934
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .3896
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8849E-01
HT FLOW CONVERGENCE VALUE= .6350E-01 CRITERION= .3889 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 15 COMPLETED. CUM ITER = 89
*** TIME = .749496E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7425E-05 OSCILLATION LIMIT = .5858
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.36 CRITERION= .3901
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5947E-01 CRITERION= .3882 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 90
*** TIME = .757386E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8461E-05 OSCILLATION LIMIT = .6675
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.95 CRITERION= .3895
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8834E-01
HT FLOW CONVERGENCE VALUE= .6341E-01 CRITERION= .3888 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 91
*** TIME = .765275E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7182E-05 OSCILLATION LIMIT = .5666
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.37 CRITERION= .3900

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .5953E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 92
 *** TIME = .773164E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8156E-05 OSCILLATION LIMIT = .6434
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.96 CRITERION= .3894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8819E-01
 HT FLOW CONVERGENCE VALUE= .6332E-01 CRITERION= .3886 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 93
 *** TIME = .781054E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6953E-05 OSCILLATION LIMIT = .5485
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.38 CRITERION= .3899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6035E-01 CRITERION= .3880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 94
 *** TIME = .788943E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7871E-05 OSCILLATION LIMIT = .6210
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.96 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8804E-01
 HT FLOW CONVERGENCE VALUE= .6543E-01 CRITERION= .3885 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 95
 *** TIME = .796833E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6740E-05 OSCILLATION LIMIT = .5317
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.39 CRITERION= .3898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6191E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 96
 *** TIME = .804722E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7613E-05 OSCILLATION LIMIT = .6006
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.97 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8790E-01
 HT FLOW CONVERGENCE VALUE= .6567E-01 CRITERION= .3884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 97
 *** TIME = .812611E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6545E-05 OSCILLATION LIMIT = .5164
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.40 CRITERION= .3897
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6195E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 98
 *** TIME = .820501E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7365E-05 OSCILLATION LIMIT = .5811
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.98 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8777E-01
 HT FLOW CONVERGENCE VALUE= .6553E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 25 COMPLETED. CUM ITER = 99
 *** TIME = .828390E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6352E-05 OSCILLATION LIMIT = .5011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.41 CRITERION= .3896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6201E-01 CRITERION= .3877 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 26 COMPLETED. CUM ITER = 100
 *** TIME = .836280E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7130E-05 OSCILLATION LIMIT = .5625
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.98 CRITERION= .3890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8764E-01
 HT FLOW CONVERGENCE VALUE= .6551E-01 CRITERION= .3882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 27 COMPLETED. CUM ITER = 101
 *** TIME = .844169E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6167E-05 OSCILLATION LIMIT = .4865
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.43 CRITERION= .3895
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6214E-01 CRITERION= .3876 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 28 COMPLETED. CUM ITER = 102
 *** TIME = .852058E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6906E-05 OSCILLATION LIMIT = .5449
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.99 CRITERION= .3889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8751E-01
 HT FLOW CONVERGENCE VALUE= .6561E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 29 COMPLETED. CUM ITER = 103
 *** TIME = .859948E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5997E-05 OSCILLATION LIMIT = .4731
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.44 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6223E-01 CRITERION= .3875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 30 COMPLETED. CUM ITER = 104
 *** TIME = .867837E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6704E-05 OSCILLATION LIMIT = .5289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.99 CRITERION= .3888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8738E-01
 HT FLOW CONVERGENCE VALUE= .6553E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 31 COMPLETED. CUM ITER = 105
 *** TIME = .875727E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5837E-05 OSCILLATION LIMIT = .4605
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.45 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6226E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 32 COMPLETED. CUM ITER = 106
 *** TIME = .883616E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6508E-05 OSCILLATION LIMIT = .5134
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.00 CRITERION= .3887
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8726E-01
 HT FLOW CONVERGENCE VALUE= .6645E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 33 COMPLETED. CUM ITER = 107
 *** TIME = .891505E+07 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .5682E-05  OSCILLATION LIMIT = .4483
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.46    CRITERION= .3891
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6342E-01 CRITERION= .3873    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 34 COMPLETED.    CUM ITER = 108
*** TIME = .899395E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6326E-05  OSCILLATION LIMIT = .4991
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01    CRITERION= .3886
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8714E-01
    HT FLOW CONVERGENCE VALUE= .6659E-01 CRITERION= .3877    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 35 COMPLETED.    CUM ITER = 109
*** TIME = .907284E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5544E-05  OSCILLATION LIMIT = .4374
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.47    CRITERION= .3890
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6337E-01 CRITERION= .3872    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 36 COMPLETED.    CUM ITER = 110
*** TIME = .915174E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6154E-05  OSCILLATION LIMIT = .4855
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01    CRITERION= .3885
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8702E-01
    HT FLOW CONVERGENCE VALUE= .6652E-01 CRITERION= .3876    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 37 COMPLETED.    CUM ITER = 111
*** TIME = .923063E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5405E-05  OSCILLATION LIMIT = .4264
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.48    CRITERION= .3889
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6348E-01 CRITERION= .3871    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 38 COMPLETED.    CUM ITER = 112
*** TIME = .930952E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5988E-05  OSCILLATION LIMIT = .4725
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.02    CRITERION= .3884
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8691E-01
    HT FLOW CONVERGENCE VALUE= .6646E-01 CRITERION= .3875    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 39 COMPLETED.    CUM ITER = 113
*** TIME = .938842E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5273E-05  OSCILLATION LIMIT = .4160
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.49    CRITERION= .3888
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6296E-01 CRITERION= .3870    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 40 COMPLETED.    CUM ITER = 114
*** TIME = .946731E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5833E-05  OSCILLATION LIMIT = .4602

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 17:07:52 JUN 18, 1995 CP= 5932.560

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6562E-01
 HT FLOW CONVERGENCE VALUE= .4982E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 115
 *** TIME = .954621E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6895E-05 OSCILLATION LIMIT = .5440
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.30 CRITERION= .3881
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4460E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 116
 *** TIME = .962510E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1149E-04 OSCILLATION LIMIT = .9067
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6536E-01
 HT FLOW CONVERGENCE VALUE= .4876E-01 CRITERION= .3873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 117
 *** TIME = .970399E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7939E-05 OSCILLATION LIMIT = .6263
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.31 CRITERION= .3880
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4540E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 4 COMPLETED. CUM ITER = 118
 *** TIME = .978289E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9466E-05 OSCILLATION LIMIT = .7468
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6525E-01
 HT FLOW CONVERGENCE VALUE= .4854E-01 CRITERION= .3872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 5 COMPLETED. CUM ITER = 119
 *** TIME = .986178E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7971E-05 OSCILLATION LIMIT = .6289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.31 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4546E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 6 COMPLETED. CUM ITER = 120
 *** TIME = .994068E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9150E-05 OSCILLATION LIMIT = .7219
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6515E-01
 HT FLOW CONVERGENCE VALUE= .4842E-01 CRITERION= .3871 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 7 COMPLETED. CUM ITER = 121
 *** TIME = .100196E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7767E-05 OSCILLATION LIMIT = .6128
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.32 CRITERION= .3878
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01

HT FLOW CONVERGENCE VALUE= .4551E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 8 COMPLETED. CUM ITER = 122
 *** TIME = .100985E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8870E-05 OSCILLATION LIMIT = .6998
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6505E-01
 HT FLOW CONVERGENCE VALUE= .4834E-01 CRITERION= .3870 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 9 COMPLETED. CUM ITER = 123
 *** TIME = .101774E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7578E-05 OSCILLATION LIMIT = .5978
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.33 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4556E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 10 COMPLETED. CUM ITER = 124
 *** TIME = .102563E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8612E-05 OSCILLATION LIMIT = .6794
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6495E-01
 HT FLOW CONVERGENCE VALUE= .4827E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 11 COMPLETED. CUM ITER = 125
 *** TIME = .103351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7394E-05 OSCILLATION LIMIT = .5834
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.33 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4559E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 126
 *** TIME = .104140E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8371E-05 OSCILLATION LIMIT = .6604
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6486E-01
 HT FLOW CONVERGENCE VALUE= .4819E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 127
 *** TIME = .104929E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7217E-05 OSCILLATION LIMIT = .5694
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.34 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4562E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 14 COMPLETED. CUM ITER = 128
 *** TIME = .105718E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8146E-05 OSCILLATION LIMIT = .6426
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6477E-01
 HT FLOW CONVERGENCE VALUE= .4809E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 15 COMPLETED. CUM ITER = 129
 *** TIME = .106507E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7048E-05 OSCILLATION LIMIT = .5561
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.35 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4568E-01 CRITERION= .3862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 16 COMPLETED. CUM ITER = 130
 *** TIME = .107296E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7935E-05 OSCILLATION LIMIT = .6260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6468E-01
 HT FLOW CONVERGENCE VALUE= .4811E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 17 COMPLETED. CUM ITER = 131
 *** TIME = .108085E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6886E-05 OSCILLATION LIMIT = .5433
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.35 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4571E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 18 COMPLETED. CUM ITER = 132
 *** TIME = .108874E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7734E-05 OSCILLATION LIMIT = .6102
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6460E-01
 HT FLOW CONVERGENCE VALUE= .4806E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 19 COMPLETED. CUM ITER = 133
 *** TIME = .109663E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6733E-05 OSCILLATION LIMIT = .5312
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4574E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 20 COMPLETED. CUM ITER = 134
 *** TIME = .110452E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7546E-05 OSCILLATION LIMIT = .5954
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6452E-01
 HT FLOW CONVERGENCE VALUE= .4801E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 21 COMPLETED. CUM ITER = 135
 *** TIME = .111241E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6586E-05 OSCILLATION LIMIT = .5196
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.37 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 22 COMPLETED. CUM ITER = 136
 *** TIME = .112030E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7367E-05 OSCILLATION LIMIT = .5812
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6444E-01
 HT FLOW CONVERGENCE VALUE= .4796E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 23 COMPLETED. CUM ITER = 137
 *** TIME = .112819E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6447E-05 OSCILLATION LIMIT = .5086

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.37 CRITERION= .3870
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4579E-01 CRITERION= .3858 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 24 COMPLETED. CUM ITER = 138

*** TIME = .113608E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .7199E-05 OSCILLATION LIMIT = .5679

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3865
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6436E-01
HT FLOW CONVERGENCE VALUE= .4790E-01 CRITERION= .3862 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 25 COMPLETED. CUM ITER = 139

*** TIME = .114397E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6314E-05 OSCILLATION LIMIT = .4982

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.38 CRITERION= .3869
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3857 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 26 COMPLETED. CUM ITER = 140

*** TIME = .115186E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .7038E-05 OSCILLATION LIMIT = .5552

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88 CRITERION= .3864
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6429E-01
HT FLOW CONVERGENCE VALUE= .4781E-01 CRITERION= .3860 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 27 COMPLETED. CUM ITER = 141

*** TIME = .115974E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6187E-05 OSCILLATION LIMIT = .4881

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.38 CRITERION= .3868
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3856 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 28 COMPLETED. CUM ITER = 142

*** TIME = .116763E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6884E-05 OSCILLATION LIMIT = .5431

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88 CRITERION= .3864
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6421E-01
HT FLOW CONVERGENCE VALUE= .4776E-01 CRITERION= .3859 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 29 COMPLETED. CUM ITER = 143

*** TIME = .117552E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6066E-05 OSCILLATION LIMIT = .4786

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.39 CRITERION= .3867
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4578E-01 CRITERION= .3855 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 30 COMPLETED. CUM ITER = 144

*** TIME = .118341E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6738E-05 OSCILLATION LIMIT = .5316

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88 CRITERION= .3863
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6414E-01
HT FLOW CONVERGENCE VALUE= .4771E-01 CRITERION= .3858 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 31 COMPLETED. CUM ITER = 145

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*** TIME = .119130E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5951E-05    OSCILLATION LIMIT = .4695
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.40    CRITERION= .3866
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4580E-01    CRITERION= .3854    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 32 COMPLETED.    CUM ITER = 146
*** TIME = .119919E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6600E-05    OSCILLATION LIMIT = .5207
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3862
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6407E-01
    HT FLOW CONVERGENCE VALUE= .4768E-01    CRITERION= .3857    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 33 COMPLETED.    CUM ITER = 147
*** TIME = .120708E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5841E-05    OSCILLATION LIMIT = .4608
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.40    CRITERION= .3865
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4581E-01    CRITERION= .3853    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 34 COMPLETED.    CUM ITER = 148
*** TIME = .121497E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6468E-05    OSCILLATION LIMIT = .5103
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3861
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6401E-01
    HT FLOW CONVERGENCE VALUE= .4764E-01    CRITERION= .3856    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 35 COMPLETED.    CUM ITER = 149
*** TIME = .122286E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5737E-05    OSCILLATION LIMIT = .4526
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.41    CRITERION= .3863
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4582E-01    CRITERION= .3852    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 36 COMPLETED.    CUM ITER = 150
*** TIME = .123075E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6342E-05    OSCILLATION LIMIT = .5004
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3860
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6394E-01
    HT FLOW CONVERGENCE VALUE= .4758E-01    CRITERION= .3855    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 37 COMPLETED.    CUM ITER = 151
*** TIME = .123864E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5637E-05    OSCILLATION LIMIT = .4447
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.42    CRITERION= .3862
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4582E-01    CRITERION= .3851    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 38 COMPLETED.    CUM ITER = 152
*** TIME = .124653E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6223E-05    OSCILLATION LIMIT = .4910
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.90    CRITERION= .3859
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6388E-01
    HT FLOW CONVERGENCE VALUE= .4683E-01    CRITERION= .3854    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 39 COMPLETED. CUM ITER = 153
*** TIME = .125442E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5543E-05 OSCILLATION LIMIT = .4373
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.42 CRITERION= .3861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4413E-01 CRITERION= .3850 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 40 COMPLETED. CUM ITER = 154
*** TIME = .126231E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6111E-05 OSCILLATION LIMIT = .4821
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***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 17:45:02 JUN 18, 1995 CP= 8132.560
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 19.14 CRITERION= .3855
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5156E-01
HT FLOW CONVERGENCE VALUE= .3695E-01 CRITERION= .3853 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 155
*** TIME = .127020E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6499E-05 OSCILLATION LIMIT = .5127
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.66 CRITERION= .3858
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3406E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 156
*** TIME = .127809E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1009E-04 OSCILLATION LIMIT = .7962
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 19.14 CRITERION= .3854
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5141E-01
HT FLOW CONVERGENCE VALUE= .3638E-01 CRITERION= .3852 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 157
*** TIME = .128598E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7392E-05 OSCILLATION LIMIT = .5832
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.67 CRITERION= .3857
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3452E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 158
*** TIME = .129386E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8653E-05 OSCILLATION LIMIT = .6827
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3853
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5135E-01
HT FLOW CONVERGENCE VALUE= .3627E-01 CRITERION= .3851 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 159
*** TIME = .130175E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7454E-05 OSCILLATION LIMIT = .5881
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.67 CRITERION= .3856

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3457E-01 CRITERION= .3848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 160
 *** TIME = .130964E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8449E-05 OSCILLATION LIMIT = .6665
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5129E-01
 HT FLOW CONVERGENCE VALUE= .3623E-01 CRITERION= .3850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 161
 *** TIME = .131753E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7326E-05 OSCILLATION LIMIT = .5780
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3461E-01 CRITERION= .3847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 162
 *** TIME = .132542E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8268E-05 OSCILLATION LIMIT = .6523
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5123E-01
 HT FLOW CONVERGENCE VALUE= .3618E-01 CRITERION= .3850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 163
 *** TIME = .133331E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7206E-05 OSCILLATION LIMIT = .5685
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3854
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3463E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 164
 *** TIME = .134120E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8101E-05 OSCILLATION LIMIT = .6391
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5117E-01
 HT FLOW CONVERGENCE VALUE= .3607E-01 CRITERION= .3849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 165
 *** TIME = .134909E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7090E-05 OSCILLATION LIMIT = .5594
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3853
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3465E-01 CRITERION= .3845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 166
 *** TIME = .135698E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7943E-05 OSCILLATION LIMIT = .6267
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5111E-01
 HT FLOW CONVERGENCE VALUE= .3611E-01 CRITERION= .3848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 167
 *** TIME = .136487E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6973E-05 OSCILLATION LIMIT = .5501
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.69 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3467E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 168
 *** TIME = .137276E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7794E-05 OSCILLATION LIMIT = .6149
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5106E-01
 HT FLOW CONVERGENCE VALUE= .3608E-01 CRITERION= .3847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 169
 *** TIME = .138065E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6865E-05 OSCILLATION LIMIT = .5416
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.69 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3471E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 170
 *** TIME = .138854E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7657E-05 OSCILLATION LIMIT = .6041
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5101E-01
 HT FLOW CONVERGENCE VALUE= .3591E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 171
 *** TIME = .139643E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6763E-05 OSCILLATION LIMIT = .5335
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.70 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3456E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 18 COMPLETED. CUM ITER = 172
 *** TIME = .140432E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7528E-05 OSCILLATION LIMIT = .5939
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5096E-01
 HT FLOW CONVERGENCE VALUE= .3586E-01 CRITERION= .3845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 19 COMPLETED. CUM ITER = 173
 *** TIME = .141221E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6666E-05 OSCILLATION LIMIT = .5259
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.70 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3435E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 20 COMPLETED. CUM ITER = 174
 *** TIME = .142010E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7404E-05 OSCILLATION LIMIT = .5841
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5091E-01
 HT FLOW CONVERGENCE VALUE= .3528E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 21 COMPLETED. CUM ITER = 175
 *** TIME = .142798E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6571E-05 OSCILLATION LIMIT = .5184
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3406E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 22 COMPLETED. CUM ITER = 176
 *** TIME = .143587E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7288E-05 OSCILLATION LIMIT = .5750
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5086E-01
 HT FLOW CONVERGENCE VALUE= .3525E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 23 COMPLETED. CUM ITER = 177
 *** TIME = .144376E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6484E-05 OSCILLATION LIMIT = .5115
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3407E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 24 COMPLETED. CUM ITER = 178
 *** TIME = .145165E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7175E-05 OSCILLATION LIMIT = .5660
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5081E-01
 HT FLOW CONVERGENCE VALUE= .3522E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 25 COMPLETED. CUM ITER = 179
 *** TIME = .145954E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6396E-05 OSCILLATION LIMIT = .5046
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3408E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 26 COMPLETED. CUM ITER = 180
 *** TIME = .146743E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7066E-05 OSCILLATION LIMIT = .5575
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5076E-01
 HT FLOW CONVERGENCE VALUE= .3520E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 27 COMPLETED. CUM ITER = 181
 *** TIME = .147532E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6312E-05 OSCILLATION LIMIT = .4980
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.72 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3409E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 28 COMPLETED. CUM ITER = 182
 *** TIME = .148321E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6962E-05 OSCILLATION LIMIT = .5493
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5072E-01
 HT FLOW CONVERGENCE VALUE= .3517E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP      8  SUBSTEP    29  COMPLETED.    CUM ITER =   183
*** TIME = .149110E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6232E-05  OSCILLATION LIMIT = .4917
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.72    CRITERION= .3844
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
    HT FLOW CONVERGENCE VALUE= .3408E-01 CRITERION= .3837    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    30  COMPLETED.    CUM ITER =   184
*** TIME = .149899E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6863E-05  OSCILLATION LIMIT = .5414
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.17    CRITERION= .3841
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5068E-01
    HT FLOW CONVERGENCE VALUE= .3516E-01 CRITERION= .3839    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    31  COMPLETED.    CUM ITER =   185
*** TIME = .150688E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6154E-05  OSCILLATION LIMIT = .4856
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.73    CRITERION= .3843
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
    HT FLOW CONVERGENCE VALUE= .3411E-01 CRITERION= .3836    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    32  COMPLETED.    CUM ITER =   186
*** TIME = .151477E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6766E-05  OSCILLATION LIMIT = .5338
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.17    CRITERION= .3840
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5064E-01
    HT FLOW CONVERGENCE VALUE= .3513E-01 CRITERION= .3838    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    33  COMPLETED.    CUM ITER =   187
*** TIME = .152266E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6081E-05  OSCILLATION LIMIT = .4797
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.73    CRITERION= .3843
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
    HT FLOW CONVERGENCE VALUE= .3411E-01 CRITERION= .3835    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    34  COMPLETED.    CUM ITER =   188
*** TIME = .153055E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6675E-05  OSCILLATION LIMIT = .5266
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.17    CRITERION= .3839
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5060E-01
    HT FLOW CONVERGENCE VALUE= .3510E-01 CRITERION= .3837    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    35  COMPLETED.    CUM ITER =   189
*** TIME = .153844E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6011E-05  OSCILLATION LIMIT = .4742
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.74    CRITERION= .3842
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
    HT FLOW CONVERGENCE VALUE= .3412E-01 CRITERION= .3834    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      8  SUBSTEP    36  COMPLETED.    CUM ITER =   190
*** TIME = .154633E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .6588E-05  OSCILLATION LIMIT = .5198
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.17    CRITERION= .3839
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5056E-01

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HT FLOW CONVERGENCE VALUE= .3508E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 37 COMPLETED. CUM ITER = 191
 *** TIME = .155421E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5944E-05 OSCILLATION LIMIT = .4689
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.74 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3413E-01 CRITERION= .3833 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 38 COMPLETED. CUM ITER = 192
 *** TIME = .156210E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6505E-05 OSCILLATION LIMIT = .5132
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.18 CRITERION= .3838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5053E-01
 HT FLOW CONVERGENCE VALUE= .3506E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 39 COMPLETED. CUM ITER = 193
 *** TIME = .156999E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5880E-05 OSCILLATION LIMIT = .4639
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.74 CRITERION= .3840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3415E-01 CRITERION= .3832 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 40 COMPLETED. CUM ITER = 194
 *** TIME = .157788E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6425E-05 OSCILLATION LIMIT = .5069

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:22:02 JUN 18, 1995 CP= 10328.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4220E-01
 HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 195
 *** TIME = .158577E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6589E-05 OSCILLATION LIMIT = .5198
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.50 CRITERION= .3837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2748E-01 CRITERION= .3831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 196
 *** TIME = .159366E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9831E-05 OSCILLATION LIMIT = .7756
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4213E-01
 HT FLOW CONVERGENCE VALUE= .2887E-01 CRITERION= .3833 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 197
 *** TIME = .160155E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7494E-05 OSCILLATION LIMIT = .5912
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.50 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2777E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 198
 *** TIME = .160944E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8620E-05 OSCILLATION LIMIT = .6800
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4210E-01
 HT FLOW CONVERGENCE VALUE= .2880E-01 CRITERION= .3832 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 199
 *** TIME = .161733E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7591E-05 OSCILLATION LIMIT = .5989
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2779E-01 CRITERION= .3829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 200
 *** TIME = .162522E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8480E-05 OSCILLATION LIMIT = .6690
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4206E-01
 HT FLOW CONVERGENCE VALUE= .2876E-01 CRITERION= .3831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 201
 *** TIME = .163311E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7512E-05 OSCILLATION LIMIT = .5926
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2780E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 202
 *** TIME = .164100E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8359E-05 OSCILLATION LIMIT = .6595
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3832
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4203E-01
 HT FLOW CONVERGENCE VALUE= .2872E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 203
 *** TIME = .164889E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7438E-05 OSCILLATION LIMIT = .5868
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 204
 *** TIME = .165678E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8247E-05 OSCILLATION LIMIT = .6506
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3831
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4200E-01
 HT FLOW CONVERGENCE VALUE= .2871E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 205
 *** TIME = .166467E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7365E-05 OSCILLATION LIMIT = .5811

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2785E-01 CRITERION= .3827 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 206
 *** TIME = .167256E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8142E-05 OSCILLATION LIMIT = .6423
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4198E-01
 HT FLOW CONVERGENCE VALUE= .2869E-01 CRITERION= .3829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 207
 *** TIME = .168045E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7294E-05 OSCILLATION LIMIT = .5755
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.52 CRITERION= .3832
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2786E-01 CRITERION= .3826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 208
 *** TIME = .168833E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8043E-05 OSCILLATION LIMIT = .6346
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4195E-01
 HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 209
 *** TIME = .169622E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7225E-05 OSCILLATION LIMIT = .5700
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.52 CRITERION= .3831
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2788E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 210
 *** TIME = .170411E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7950E-05 OSCILLATION LIMIT = .6272
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3828
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4192E-01
 HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3827 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 211
 *** TIME = .171200E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7160E-05 OSCILLATION LIMIT = .5649
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.52 CRITERION= .3830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2790E-01 CRITERION= .3824 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 212
 *** TIME = .171989E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7862E-05 OSCILLATION LIMIT = .6202
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4189E-01
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .3826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 213

*** TIME = .172778E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7096E-05 OSCILLATION LIMIT = .5599
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.53 CRITERION= .3829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2791E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 214
 *** TIME = .173567E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7778E-05 OSCILLATION LIMIT = .6136
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3826
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4187E-01
 HT FLOW CONVERGENCE VALUE= .2864E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 215
 *** TIME = .174356E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7035E-05 OSCILLATION LIMIT = .5550
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.53 CRITERION= .3828
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2792E-01 CRITERION= .3822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 216
 *** TIME = .175145E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7696E-05 OSCILLATION LIMIT = .6072
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3825
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4185E-01
 HT FLOW CONVERGENCE VALUE= .2862E-01 CRITERION= .3824 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 23 COMPLETED. CUM ITER = 217
 *** TIME = .175934E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6976E-05 OSCILLATION LIMIT = .5504
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.53 CRITERION= .3827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2793E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 24 COMPLETED. CUM ITER = 218
 *** TIME = .176723E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7619E-05 OSCILLATION LIMIT = .6011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3825
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4183E-01
 HT FLOW CONVERGENCE VALUE= .2862E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 25 COMPLETED. CUM ITER = 219
 *** TIME = .177512E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6920E-05 OSCILLATION LIMIT = .5459
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.54 CRITERION= .3826
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 26 COMPLETED. CUM ITER = 220
 *** TIME = .178301E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7545E-05 OSCILLATION LIMIT = .5953
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4182E-01
 HT FLOW CONVERGENCE VALUE= .2860E-01 CRITERION= .3822 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 27 COMPLETED. CUM ITER = 221
*** TIME = .179090E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6866E-05 OSCILLATION LIMIT = .5417
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.54 CRITERION= .3825
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 28 COMPLETED. CUM ITER = 222
*** TIME = .179879E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7474E-05 OSCILLATION LIMIT = .5897
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4180E-01
HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3821 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 29 COMPLETED. CUM ITER = 223
*** TIME = .180668E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6814E-05 OSCILLATION LIMIT = .5376
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.54 CRITERION= .3824
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2797E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 30 COMPLETED. CUM ITER = 224
*** TIME = .181457E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7406E-05 OSCILLATION LIMIT = .5843
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3822
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4178E-01
HT FLOW CONVERGENCE VALUE= .2847E-01 CRITERION= .3820 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 31 COMPLETED. CUM ITER = 225
*** TIME = .182245E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6765E-05 OSCILLATION LIMIT = .5338
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3818 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 32 COMPLETED. CUM ITER = 226
*** TIME = .183034E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7342E-05 OSCILLATION LIMIT = .5792
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3821
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4176E-01
HT FLOW CONVERGENCE VALUE= .2832E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 33 COMPLETED. CUM ITER = 227
*** TIME = .183823E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6721E-05 OSCILLATION LIMIT = .5302
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2769E-01 CRITERION= .3817 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 34 COMPLETED. CUM ITER = 228
*** TIME = .184612E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7283E-05 OSCILLATION LIMIT = .5745
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3820

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4175E-01
 HT FLOW CONVERGENCE VALUE= .2826E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 35 COMPLETED. CUM ITER = 229
 *** TIME = .185401E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6680E-05 OSCILLATION LIMIT = .5270
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2770E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 36 COMPLETED. CUM ITER = 230
 *** TIME = .186190E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7223E-05 OSCILLATION LIMIT = .5698
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.96 CRITERION= .3819
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4173E-01
 HT FLOW CONVERGENCE VALUE= .2825E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 37 COMPLETED. CUM ITER = 231
 *** TIME = .186979E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6635E-05 OSCILLATION LIMIT = .5235
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 38 COMPLETED. CUM ITER = 232
 *** TIME = .187768E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7165E-05 OSCILLATION LIMIT = .5652
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.96 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4171E-01
 HT FLOW CONVERGENCE VALUE= .2824E-01 CRITERION= .3817 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 39 COMPLETED. CUM ITER = 233
 *** TIME = .188557E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6593E-05 OSCILLATION LIMIT = .5202
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.56 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 40 COMPLETED. CUM ITER = 234
 *** TIME = .189346E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7108E-05 OSCILLATION LIMIT = .5608

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:59:05 JUN 18, 1995 CP= 12526.640
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3599E-01
 HT FLOW CONVERGENCE VALUE= .2436E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 1 COMPLETED. CUM ITER = 235
 *** TIME = .190135E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7116E-05 OSCILLATION LIMIT = .5614
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2328E-01 CRITERION= .3813 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 2 COMPLETED. CUM ITER = 236
 *** TIME = .190924E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9849E-05 OSCILLATION LIMIT = .7770
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3596E-01
 HT FLOW CONVERGENCE VALUE= .2412E-01 CRITERION= .3815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 3 COMPLETED. CUM ITER = 237
 *** TIME = .191713E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7927E-05 OSCILLATION LIMIT = .6254
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2346E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 4 COMPLETED. CUM ITER = 238
 *** TIME = .192502E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8885E-05 OSCILLATION LIMIT = .7010
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3594E-01
 HT FLOW CONVERGENCE VALUE= .2406E-01 CRITERION= .3814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 5 COMPLETED. CUM ITER = 239
 *** TIME = .193291E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8032E-05 OSCILLATION LIMIT = .6337
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2347E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 240
 *** TIME = .194080E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8789E-05 OSCILLATION LIMIT = .6934
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3593E-01
 HT FLOW CONVERGENCE VALUE= .2403E-01 CRITERION= .3813 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 241
 *** TIME = .194868E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7984E-05 OSCILLATION LIMIT = .6299
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2348E-01 CRITERION= .3811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 242
 *** TIME = .195657E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8708E-05 OSCILLATION LIMIT = .6870
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3591E-01
 HT FLOW CONVERGENCE VALUE= .2401E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 243
 *** TIME = .196446E+08 TIME INC = 78894.0


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*** RESPONSE EIGENVALUE = .7940E-05  OSCILLATION LIMIT = .6264
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.36    CRITERION= .3815
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
  HT FLOW CONVERGENCE VALUE= .2348E-01 CRITERION= .3810    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 10 COMPLETED.    CUM ITER = 244
*** TIME = .197235E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8633E-05  OSCILLATION LIMIT = .6811
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.75    CRITERION= .3812
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3590E-01
  HT FLOW CONVERGENCE VALUE= .2399E-01 CRITERION= .3811    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 11 COMPLETED.    CUM ITER = 245
*** TIME = .198024E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7896E-05  OSCILLATION LIMIT = .6230
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.36    CRITERION= .3814
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
  HT FLOW CONVERGENCE VALUE= .2349E-01 CRITERION= .3809    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 12 COMPLETED.    CUM ITER = 246
*** TIME = .198813E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8562E-05  OSCILLATION LIMIT = .6755
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.76    CRITERION= .3811
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3588E-01
  HT FLOW CONVERGENCE VALUE= .2398E-01 CRITERION= .3810    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 13 COMPLETED.    CUM ITER = 247
*** TIME = .199602E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7852E-05  OSCILLATION LIMIT = .6195
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.36    CRITERION= .3813
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
  HT FLOW CONVERGENCE VALUE= .2350E-01 CRITERION= .3808    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 14 COMPLETED.    CUM ITER = 248
*** TIME = .200391E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8496E-05  OSCILLATION LIMIT = .6703
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.76    CRITERION= .3811
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3587E-01
  HT FLOW CONVERGENCE VALUE= .2397E-01 CRITERION= .3810    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 15 COMPLETED.    CUM ITER = 249
*** TIME = .201180E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7809E-05  OSCILLATION LIMIT = .6161
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.37    CRITERION= .3812
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
  HT FLOW CONVERGENCE VALUE= .2350E-01 CRITERION= .3807    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 16 COMPLETED.    CUM ITER = 250
*** TIME = .201969E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8433E-05  OSCILLATION LIMIT = .6653
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.76    CRITERION= .3810
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3585E-01
  HT FLOW CONVERGENCE VALUE= .2394E-01 CRITERION= .3809    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 10 SUBSTEP 17 COMPLETED. CUM ITER = 251
*** TIME = .202758E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7767E-05 OSCILLATION LIMIT = .6128
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3811
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
HT FLOW CONVERGENCE VALUE= .2351E-01 CRITERION= .3806 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 18 COMPLETED. CUM ITER = 252
*** TIME = .203547E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8372E-05 OSCILLATION LIMIT = .6605
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3809
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3584E-01
HT FLOW CONVERGENCE VALUE= .2395E-01 CRITERION= .3808 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 253
*** TIME = .204336E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7723E-05 OSCILLATION LIMIT = .6093
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3810
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
HT FLOW CONVERGENCE VALUE= .2352E-01 CRITERION= .3805 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 254
*** TIME = .205125E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8313E-05 OSCILLATION LIMIT = .6559
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3808
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3583E-01
HT FLOW CONVERGENCE VALUE= .2380E-01 CRITERION= .3807 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 255
*** TIME = .205914E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7686E-05 OSCILLATION LIMIT = .6064
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3809
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
HT FLOW CONVERGENCE VALUE= .2339E-01 CRITERION= .3805 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 256
*** TIME = .206703E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8261E-05 OSCILLATION LIMIT = .6517
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3807
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3582E-01
HT FLOW CONVERGENCE VALUE= .2379E-01 CRITERION= .3806 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 257
*** TIME = .207492E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7652E-05 OSCILLATION LIMIT = .6037
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3808
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3804 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 258
*** TIME = .208280E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8208E-05 OSCILLATION LIMIT = .6476
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3806
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3580E-01

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HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 25 COMPLETED. CUM ITER = 259
 *** TIME = .209069E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7616E-05 OSCILLATION LIMIT = .6008
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 26 COMPLETED. CUM ITER = 260
 *** TIME = .209858E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8157E-05 OSCILLATION LIMIT = .6436
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3805
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3579E-01
 HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3804 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 27 COMPLETED. CUM ITER = 261
 *** TIME = .210647E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7580E-05 OSCILLATION LIMIT = .5980
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2342E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 28 COMPLETED. CUM ITER = 262
 *** TIME = .211436E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8108E-05 OSCILLATION LIMIT = .6397
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3578E-01
 HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 29 COMPLETED. CUM ITER = 263
 *** TIME = .212225E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7548E-05 OSCILLATION LIMIT = .5955
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 30 COMPLETED. CUM ITER = 264
 *** TIME = .213014E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8061E-05 OSCILLATION LIMIT = .6360
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3577E-01
 HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 31 COMPLETED. CUM ITER = 265
 *** TIME = .213803E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7515E-05 OSCILLATION LIMIT = .5929
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3805
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3800 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 32 COMPLETED. CUM ITER = 266
 *** TIME = .214592E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8015E-05 OSCILLATION LIMIT = .6324
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3803
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3576E-01
 HT FLOW CONVERGENCE VALUE= .2376E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 33 COMPLETED. CUM ITER = 267
 *** TIME = .215381E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7484E-05 OSCILLATION LIMIT = .5904
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 34 COMPLETED. CUM ITER = 268
 *** TIME = .216170E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7971E-05 OSCILLATION LIMIT = .6289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3574E-01
 HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .3801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 35 COMPLETED. CUM ITER = 269
 *** TIME = .216959E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7453E-05 OSCILLATION LIMIT = .5880
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3803
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 36 COMPLETED. CUM ITER = 270
 *** TIME = .217748E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7928E-05 OSCILLATION LIMIT = .6255
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.77 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3573E-01
 HT FLOW CONVERGENCE VALUE= .2371E-01 CRITERION= .3800 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 37 COMPLETED. CUM ITER = 271
 *** TIME = .218537E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7425E-05 OSCILLATION LIMIT = .5858
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3798 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 38 COMPLETED. CUM ITER = 272
 *** TIME = .219326E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7887E-05 OSCILLATION LIMIT = .6223
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.77 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3572E-01
 HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 39 COMPLETED. CUM ITER = 273
 *** TIME = .220115E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7397E-05 OSCILLATION LIMIT = .5835
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2338E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 40 COMPLETED. CUM ITER = 274
 *** TIME = .220904E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7847E-05 OSCILLATION LIMIT = .6191

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:36:13 JUN 18, 1995 CP= 14725.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3140E-01
 HT FLOW CONVERGENCE VALUE= .2076E-01 CRITERION= .3798 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 275
 *** TIME = .221692E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7947E-05 OSCILLATION LIMIT = .6270
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.70 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2006E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 276
 *** TIME = .222481E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1050E-04 OSCILLATION LIMIT = .8285
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3138E-01
 HT FLOW CONVERGENCE VALUE= .2058E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 277
 *** TIME = .223270E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8778E-05 OSCILLATION LIMIT = .6925
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2019E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 278
 *** TIME = .224059E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9617E-05 OSCILLATION LIMIT = .7587
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3137E-01
 HT FLOW CONVERGENCE VALUE= .2053E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 279
 *** TIME = .224848E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8897E-05 OSCILLATION LIMIT = .7019
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2020E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 280
 *** TIME = .225637E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9545E-05 OSCILLATION LIMIT = .7531
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3136E-01
 HT FLOW CONVERGENCE VALUE= .2053E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 281

*** TIME = .226426E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8866E-05 OSCILLATION LIMIT = .6994
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2021E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 282
 *** TIME = .227215E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9486E-05 OSCILLATION LIMIT = .7484
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3135E-01
 HT FLOW CONVERGENCE VALUE= .2051E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 283
 *** TIME = .228004E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8839E-05 OSCILLATION LIMIT = .6973
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2021E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 284
 *** TIME = .228793E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9431E-05 OSCILLATION LIMIT = .7441
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3134E-01
 HT FLOW CONVERGENCE VALUE= .2051E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 285
 *** TIME = .229582E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8811E-05 OSCILLATION LIMIT = .6951
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 286
 *** TIME = .230371E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9381E-05 OSCILLATION LIMIT = .7401
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3133E-01
 HT FLOW CONVERGENCE VALUE= .2050E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 287
 *** TIME = .231160E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8783E-05 OSCILLATION LIMIT = .6929
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 288
 *** TIME = .231949E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9334E-05 OSCILLATION LIMIT = .7364
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3132E-01
 HT FLOW CONVERGENCE VALUE= .2048E-01 CRITERION= .3792 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 289
*** TIME = .232738E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8755E-05 OSCILLATION LIMIT = .6907
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3794
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 290
*** TIME = .233527E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9290E-05 OSCILLATION LIMIT = .7329
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3792
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3131E-01
HT FLOW CONVERGENCE VALUE= .2048E-01 CRITERION= .3791 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 291
*** TIME = .234315E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8728E-05 OSCILLATION LIMIT = .6886
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3793
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3789 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 292
*** TIME = .235104E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9247E-05 OSCILLATION LIMIT = .7295
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3130E-01
HT FLOW CONVERGENCE VALUE= .2047E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 293
*** TIME = .235893E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8701E-05 OSCILLATION LIMIT = .6865
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3792
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3788 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 294
*** TIME = .236682E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9205E-05 OSCILLATION LIMIT = .7262
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3790
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3129E-01
HT FLOW CONVERGENCE VALUE= .2045E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 295
*** TIME = .237471E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8675E-05 OSCILLATION LIMIT = .6844
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3788 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 296
*** TIME = .238260E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9165E-05 OSCILLATION LIMIT = .7231
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3790

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3129E-01
 HT FLOW CONVERGENCE VALUE= .2044E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 297
 *** TIME = .239049E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8649E-05 OSCILLATION LIMIT = .6824
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 298
 *** TIME = .239838E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9127E-05 OSCILLATION LIMIT = .7200
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3128E-01
 HT FLOW CONVERGENCE VALUE= .2044E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 299
 *** TIME = .240627E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = .6804
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 300
 *** TIME = .241416E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9090E-05 OSCILLATION LIMIT = .7171
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3128E-01
 HT FLOW CONVERGENCE VALUE= .2043E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 301
 *** TIME = .242205E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8600E-05 OSCILLATION LIMIT = .6785
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 302
 *** TIME = .242994E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9054E-05 OSCILLATION LIMIT = .7143
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3127E-01
 HT FLOW CONVERGENCE VALUE= .2042E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 29 COMPLETED. CUM ITER = 303
 *** TIME = .243783E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8578E-05 OSCILLATION LIMIT = .6767
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 30 COMPLETED. CUM ITER = 304
 *** TIME = .244572E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9019E-05 OSCILLATION LIMIT = .7115
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3127E-01
 HT FLOW CONVERGENCE VALUE= .2041E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 31 COMPLETED. CUM ITER = 305
 *** TIME = .245361E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8555E-05 OSCILLATION LIMIT = .6749
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 32 COMPLETED. CUM ITER = 306
 *** TIME = .246150E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8985E-05 OSCILLATION LIMIT = .7089
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2040E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 33 COMPLETED. CUM ITER = 307
 *** TIME = .246939E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8533E-05 OSCILLATION LIMIT = .6732
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 34 COMPLETED. CUM ITER = 308
 *** TIME = .247727E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8952E-05 OSCILLATION LIMIT = .7063
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2039E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 35 COMPLETED. CUM ITER = 309
 *** TIME = .248516E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8512E-05 OSCILLATION LIMIT = .6715
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 36 COMPLETED. CUM ITER = 310
 *** TIME = .249305E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8919E-05 OSCILLATION LIMIT = .7037
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2039E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 37 COMPLETED. CUM ITER = 311
 *** TIME = .250094E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8491E-05 OSCILLATION LIMIT = .6699
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3781 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 38 COMPLETED. CUM ITER = 312
 *** TIME = .250883E+08 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .8888E-05  OSCILLATION LIMIT = .7012
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.09      CRITERION= .3783
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3125E-01
    HT FLOW CONVERGENCE VALUE= .2037E-01  CRITERION= .3782    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  11  SUBSTEP  39 COMPLETED.    CUM ITER =  313
*** TIME = .251672E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8471E-05  OSCILLATION LIMIT = .6683
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 11.74      CRITERION= .3784
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3089E-01
    HT FLOW CONVERGENCE VALUE= .2022E-01  CRITERION= .3780    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  11  SUBSTEP  40 COMPLETED.    CUM ITER =  314
*** TIME = .252461E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8859E-05  OSCILLATION LIMIT = .6989

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX  20:13:19 JUN 18, 1995 CP= 16926.190
FOR SUPPORT CALL ROBERT BAHNEY  PHONE (702) 794-5337  FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 10.73      CRITERION= .3782
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .2773E-01
    HT FLOW CONVERGENCE VALUE= .1803E-01  CRITERION= .3781    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  12  SUBSTEP  1 COMPLETED.    CUM ITER =  315
*** TIME = .253250E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9101E-05  OSCILLATION LIMIT = .7180
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 10.38      CRITERION= .3783
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .2736E-01
    HT FLOW CONVERGENCE VALUE= .1756E-01  CRITERION= .3779    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  12  SUBSTEP  2 COMPLETED.    CUM ITER =  316
*** TIME = .254039E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1155E-04  OSCILLATION LIMIT = .9114
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 10.73      CRITERION= .3781
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .2772E-01
    HT FLOW CONVERGENCE VALUE= .1789E-01  CRITERION= .3780    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  12  SUBSTEP  3 COMPLETED.    CUM ITER =  317
*** TIME = .254828E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9959E-05  OSCILLATION LIMIT = .7857
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 10.38      CRITERION= .3782
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .2736E-01
    HT FLOW CONVERGENCE VALUE= .1766E-01  CRITERION= .3778    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  12  SUBSTEP  4 COMPLETED.    CUM ITER =  318
*** TIME = .255617E+08      TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1070E-04  OSCILLATION LIMIT = .8444
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 10.73      CRITERION= .3780
    EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .2772E-01
    HT FLOW CONVERGENCE VALUE= .1786E-01  CRITERION= .3779    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1

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*** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 319
*** TIME = .256406E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1009E-04 OSCILLATION LIMIT = .7960
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3781
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
HT FLOW CONVERGENCE VALUE= .1767E-01 CRITERION= .3778 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 320
*** TIME = .257195E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1065E-04 OSCILLATION LIMIT = .8399
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3779
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2771E-01
HT FLOW CONVERGENCE VALUE= .1785E-01 CRITERION= .3779 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 321
*** TIME = .257984E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1007E-04 OSCILLATION LIMIT = .7945
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3780
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
HT FLOW CONVERGENCE VALUE= .1767E-01 CRITERION= .3777 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 322
*** TIME = .258773E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1060E-04 OSCILLATION LIMIT = .8363
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3778
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2771E-01
HT FLOW CONVERGENCE VALUE= .1784E-01 CRITERION= .3778 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 323
*** TIME = .259562E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1005E-04 OSCILLATION LIMIT = .7931
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3779
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3776 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 324
*** TIME = .260351E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1056E-04 OSCILLATION LIMIT = .8330
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3777
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1783E-01 CRITERION= .3777 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 325
*** TIME = .261139E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1003E-04 OSCILLATION LIMIT = .7917
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3778
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3775 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 326
*** TIME = .261928E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1052E-04 OSCILLATION LIMIT = .8299
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3777
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01

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HT FLOW CONVERGENCE VALUE= .1782E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 327
 *** TIME = .262717E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1002E-04 OSCILLATION LIMIT = .7902
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 328
 *** TIME = .263506E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = .8271
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1782E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 329
 *** TIME = .264295E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9995E-05 OSCILLATION LIMIT = .7886
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 330
 *** TIME = .265084E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1045E-04 OSCILLATION LIMIT = .8243
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2769E-01
 HT FLOW CONVERGENCE VALUE= .1781E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 331
 *** TIME = .265873E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9975E-05 OSCILLATION LIMIT = .7870
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 332
 *** TIME = .266662E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1041E-04 OSCILLATION LIMIT = .8217
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2769E-01
 HT FLOW CONVERGENCE VALUE= .1780E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 333
 *** TIME = .267451E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9955E-05 OSCILLATION LIMIT = .7854
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 334
 *** TIME = .268240E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1038E-04 OSCILLATION LIMIT = .8191
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 21 COMPLETED. CUM ITER = 335
 *** TIME = .269029E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9936E-05 OSCILLATION LIMIT = .7839
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 22 COMPLETED. CUM ITER = 336
 *** TIME = .269818E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1035E-04 OSCILLATION LIMIT = .8166
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 23 COMPLETED. CUM ITER = 337
 *** TIME = .270607E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9917E-05 OSCILLATION LIMIT = .7824
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 24 COMPLETED. CUM ITER = 338
 *** TIME = .271396E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1032E-04 OSCILLATION LIMIT = .8143
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 25 COMPLETED. CUM ITER = 339
 *** TIME = .272185E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9898E-05 OSCILLATION LIMIT = .7809
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 26 COMPLETED. CUM ITER = 340
 *** TIME = .272974E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1029E-04 OSCILLATION LIMIT = .8119
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1778E-01 CRITERION= .3770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 27 COMPLETED. CUM ITER = 341
 *** TIME = .273762E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9879E-05 OSCILLATION LIMIT = .7794
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 28 COMPLETED. CUM ITER = 342
 *** TIME = .274551E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1026E-04 OSCILLATION LIMIT = .8096

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1777E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 29 COMPLETED. CUM ITER = 343
 *** TIME = .275340E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9861E-05 OSCILLATION LIMIT = .7780
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3768 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 30 COMPLETED. CUM ITER = 344
 *** TIME = .276129E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1023E-04 OSCILLATION LIMIT = .8074
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1776E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 31 COMPLETED. CUM ITER = 345
 *** TIME = .276918E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9844E-05 OSCILLATION LIMIT = .7766
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 32 COMPLETED. CUM ITER = 346
 *** TIME = .277707E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1021E-04 OSCILLATION LIMIT = .8052
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
 HT FLOW CONVERGENCE VALUE= .1776E-01 CRITERION= .3768 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 33 COMPLETED. CUM ITER = 347
 *** TIME = .278496E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9826E-05 OSCILLATION LIMIT = .7752
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 34 COMPLETED. CUM ITER = 348
 *** TIME = .279285E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = .8031
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
 HT FLOW CONVERGENCE VALUE= .1775E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 35 COMPLETED. CUM ITER = 349
 *** TIME = .280074E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9809E-05 OSCILLATION LIMIT = .7739
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 36 COMPLETED. CUM ITER = 350

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*** TIME = .280863E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1015E-04    OSCILLATION LIMIT = .8011
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 10.74    CRITERION= .3767
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
    HT FLOW CONVERGENCE VALUE= .1769E-01    CRITERION= .3766    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 37 COMPLETED.    CUM ITER = 351
*** TIME = .281652E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9794E-05    OSCILLATION LIMIT = .7727
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 10.40    CRITERION= .3768
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
    HT FLOW CONVERGENCE VALUE= .1762E-01    CRITERION= .3764    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 38 COMPLETED.    CUM ITER = 352
*** TIME = .282441E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1013E-04    OSCILLATION LIMIT = .7991
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 10.74    CRITERION= .3766
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2765E-01
    HT FLOW CONVERGENCE VALUE= .1772E-01    CRITERION= .3765    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 39 COMPLETED.    CUM ITER = 353
*** TIME = .283230E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9776E-05    OSCILLATION LIMIT = .7713
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 10.41    CRITERION= .3767
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
    HT FLOW CONVERGENCE VALUE= .1765E-01    CRITERION= .3764    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 40 COMPLETED.    CUM ITER = 354
*** TIME = .284019E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1010E-04    OSCILLATION LIMIT = .7969
    Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM    FROM .31558E+08 TO .28402E+09 BY .31558E+08

TIME= .31558E+08

SELECT    FOR ITEM=MAT    COMPONENT=
IN RANGE    14 TO    14 STEP    1

    22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT    ELEMENTS CREATED FROM SELECTED AREAS.

    1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
    22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION    1
6169.91289    .000000000E+00    .000000000E+00    .000000000E+00

ALL SELECT    FOR ITEM=AREA COMPONENT=
IN RANGE    1 TO    160 STEP    1

    160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT    FOR ITEM=ELEM COMPONENT=
IN RANGE    1 TO    4833 STEP    1

    4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 114.16    .00000E+00    EXPANSION KEY = 1

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CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 115.23 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 117.89 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 19125.730 TIME= 20:50:26
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:50:26 JUN 18, 1995 CP= 19125.730
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
TIME AT END OF THE LOAD STEP.31558E+08
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 9.669 CRITERION= .3765
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2492E-01
HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .3764 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 355
*** TIME = .284808E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = .8265
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.337 CRITERION= .3766
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .3763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 356
*** TIME = .285597E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1273E-04 OSCILLATION LIMIT = 1.004
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3764
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2492E-01

HT FLOW CONVERGENCE VALUE= .1576E-01 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 357
 *** TIME = .286386E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1131E-04 OSCILLATION LIMIT = .8920
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.338 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 358
 *** TIME = .287174E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1195E-04 OSCILLATION LIMIT = .9426
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 359
 *** TIME = .287963E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1144E-04 OSCILLATION LIMIT = .9022
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.340 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 360
 *** TIME = .288752E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1190E-04 OSCILLATION LIMIT = .9387
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 361
 *** TIME = .289541E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1142E-04 OSCILLATION LIMIT = .9011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.341 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 8 COMPLETED. CUM ITER = 362
 *** TIME = .290330E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1186E-04 OSCILLATION LIMIT = .9358
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1572E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 9 COMPLETED. CUM ITER = 363
 *** TIME = .291119E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1141E-04 OSCILLATION LIMIT = .9002
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.342 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 10 COMPLETED. CUM ITER = 364
 *** TIME = .291908E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1183E-04 OSCILLATION LIMIT = .9331
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 11 COMPLETED. CUM ITER = 365
 *** TIME = .292697E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1140E-04 OSCILLATION LIMIT = .8991
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.343 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 12 COMPLETED. CUM ITER = 366
 *** TIME = .293486E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1180E-04 OSCILLATION LIMIT = .9306
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 13 COMPLETED. CUM ITER = 367
 *** TIME = .294275E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1138E-04 OSCILLATION LIMIT = .8979
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.344 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 14 COMPLETED. CUM ITER = 368
 *** TIME = .295064E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1177E-04 OSCILLATION LIMIT = .9282
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1570E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 15 COMPLETED. CUM ITER = 369
 *** TIME = .295853E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1137E-04 OSCILLATION LIMIT = .8966
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.346 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 370
 *** TIME = .296642E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1174E-04 OSCILLATION LIMIT = .9259
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.672 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 371
 *** TIME = .297431E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1135E-04 OSCILLATION LIMIT = .8954
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.347 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 18 COMPLETED. CUM ITER = 372
 *** TIME = .298220E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1171E-04 OSCILLATION LIMIT = .9238

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.672 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 19 COMPLETED. CUM ITER = 373
 *** TIME = .299009E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1133E-04 OSCILLATION LIMIT = .8941
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.348 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 20 COMPLETED. CUM ITER = 374
 *** TIME = .299798E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1168E-04 OSCILLATION LIMIT = .9217
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.672 CRITERION= .3757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 21 COMPLETED. CUM ITER = 375
 *** TIME = .300586E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1132E-04 OSCILLATION LIMIT = .8928
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.349 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3755 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 22 COMPLETED. CUM ITER = 376
 *** TIME = .301375E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1166E-04 OSCILLATION LIMIT = .9196
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.672 CRITERION= .3756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
 HT FLOW CONVERGENCE VALUE= .1575E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 23 COMPLETED. CUM ITER = 377
 *** TIME = .302164E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1130E-04 OSCILLATION LIMIT = .8916
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.351 CRITERION= .3757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3754 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 24 COMPLETED. CUM ITER = 378
 *** TIME = .302953E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1163E-04 OSCILLATION LIMIT = .9175
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.673 CRITERION= .3755
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3755 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 379
 *** TIME = .303742E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1128E-04 OSCILLATION LIMIT = .8903
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.352 CRITERION= .3756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3753 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 26 COMPLETED. CUM ITER = 380

*** TIME = .304531E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1160E-04 OSCILLATION LIMIT = .9156
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.673 CRITERION= .3754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3754 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 27 COMPLETED. CUM ITER = 381
 *** TIME = .305320E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1127E-04 OSCILLATION LIMIT = .8890
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.353 CRITERION= .3755
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3752 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 28 COMPLETED. CUM ITER = 382
 *** TIME = .306109E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1158E-04 OSCILLATION LIMIT = .9136
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.673 CRITERION= .3754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
 HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .3753 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 29 COMPLETED. CUM ITER = 383
 *** TIME = .306898E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = .8878
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.354 CRITERION= .3754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1579E-01 CRITERION= .3752 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 30 COMPLETED. CUM ITER = 384
 *** TIME = .307687E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1156E-04 OSCILLATION LIMIT = .9118
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3753
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
 HT FLOW CONVERGENCE VALUE= .1607E-01 CRITERION= .3752 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 31 COMPLETED. CUM ITER = 385
 *** TIME = .308476E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1124E-04 OSCILLATION LIMIT = .8866
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.355 CRITERION= .3753
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3751 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 32 COMPLETED. CUM ITER = 386
 *** TIME = .309265E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1153E-04 OSCILLATION LIMIT = .9098
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3752
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
 HT FLOW CONVERGENCE VALUE= .1606E-01 CRITERION= .3751 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 33 COMPLETED. CUM ITER = 387
 *** TIME = .310054E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1122E-04 OSCILLATION LIMIT = .8853
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.357 CRITERION= .3753
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3750 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 34 COMPLETED. CUM ITER = 388
*** TIME = .310843E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1151E-04 OSCILLATION LIMIT = .9080
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 35 COMPLETED. CUM ITER = 389
*** TIME = .311632E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1121E-04 OSCILLATION LIMIT = .8842
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.358 CRITERION= .3752
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 36 COMPLETED. CUM ITER = 390
*** TIME = .312421E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1149E-04 OSCILLATION LIMIT = .9062
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 37 COMPLETED. CUM ITER = 391
*** TIME = .313209E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1119E-04 OSCILLATION LIMIT = .8831
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.359 CRITERION= .3751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1603E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 38 COMPLETED. CUM ITER = 392
*** TIME = .313998E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1146E-04 OSCILLATION LIMIT = .9045
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.675 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 39 COMPLETED. CUM ITER = 393
*** TIME = .314787E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1118E-04 OSCILLATION LIMIT = .8819
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.360 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 40 COMPLETED. CUM ITER = 394
*** TIME = .315576E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1144E-04 OSCILLATION LIMIT = .9027

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 21:27:31 JUN 18, 1995 CP= 21326.480
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44. BWR UCF/Waste Package with 10 yr old, 49 GMD/NTU SNF

HT FLOW CONVERGENCE VALUE= 61.45 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1038 CRITERION= .3746 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 395
 *** TIME = .323466E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1066E-04 OSCILLATION LIMIT = 8.411
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.15 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9828E-01 CRITERION= .3742 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 396
 *** TIME = .331355E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1802E-04 OSCILLATION LIMIT = 14.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.48 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9900E-01 CRITERION= .3739 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 397
 *** TIME = .339245E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1616E-04 OSCILLATION LIMIT = 12.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.18 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9829E-01 CRITERION= .3735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 398
 *** TIME = .347134E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1723E-04 OSCILLATION LIMIT = 13.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.51 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9875E-01 CRITERION= .3733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 399
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.21 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9819E-01 CRITERION= .3728 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 400
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1709E-04 OSCILLATION LIMIT = 13.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.54 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9855E-01 CRITERION= .3726 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 401
 *** TIME = .370802E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.24 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9797E-01 CRITERION= .3721 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 402
 *** TIME = .378692E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1698E-04 OSCILLATION LIMIT = 13.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 61.58 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9812E-01 CRITERION= .3719 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 403
 *** TIME = .386581E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.27 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .3714 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 404
 *** TIME = .394470E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1689E-04 OSCILLATION LIMIT = 13.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.61 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .3712 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 405
 *** TIME = .402360E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.30 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9700E-01 CRITERION= .3707 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 406
 *** TIME = .410249E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1681E-04 OSCILLATION LIMIT = 13.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.64 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9748E-01 CRITERION= .3705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 407
 *** TIME = .418139E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1643E-04 OSCILLATION LIMIT = 12.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.33 CRITERION= .3755
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9812E-01 CRITERION= .3700 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 408
 *** TIME = .426028E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1675E-04 OSCILLATION LIMIT = 13.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.67 CRITERION= .3751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1018 CRITERION= .3698 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 409
 *** TIME = .433917E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1643E-04 OSCILLATION LIMIT = 12.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.36 CRITERION= .3749
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .3693 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 410
 *** TIME = .441807E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1669E-04 OSCILLATION LIMIT = 13.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.70 CRITERION= .3744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .3691 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 411
 *** TIME = .449696E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.40 CRITERION= .3742
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1009 CRITERION= .3686 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 412
 *** TIME = .457586E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1664E-04 OSCILLATION LIMIT = 13.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.73 CRITERION= .3738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1009 CRITERION= .3684 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 413
 *** TIME = .465475E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1641E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.43 CRITERION= .3735
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .3680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 414
 *** TIME = .473364E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1660E-04 OSCILLATION LIMIT = 13.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.76 CRITERION= .3731
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3677 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 415
 *** TIME = .481254E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.46 CRITERION= .3728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1025 CRITERION= .3673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 416
 *** TIME = .489143E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1656E-04 OSCILLATION LIMIT = 13.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.79 CRITERION= .3724
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .3670 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 417
 *** TIME = .497033E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1637E-04 OSCILLATION LIMIT = 12.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.49 CRITERION= .3722
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587

HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 418
 *** TIME = .504922E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1652E-04 OSCILLATION LIMIT = 13.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.82 CRITERION= .3717
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1017 CRITERION= .3663 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 419
 *** TIME = .512811E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.52 CRITERION= .3715
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1013 CRITERION= .3659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 420
 *** TIME = .520701E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1648E-04 OSCILLATION LIMIT = 13.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.85 CRITERION= .3711
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1013 CRITERION= .3657 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 421
 *** TIME = .528590E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1633E-04 OSCILLATION LIMIT = 12.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.55 CRITERION= .3708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .3652 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 422
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1645E-04 OSCILLATION LIMIT = 12.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.89 CRITERION= .3704
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .3650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 423
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1631E-04 OSCILLATION LIMIT = 12.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.58 CRITERION= .3701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1003 CRITERION= .3645 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 424
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.92 CRITERION= .3697
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1002 CRITERION= .3643 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 425
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.61 CRITERION= .3695
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9989E-01 CRITERION= .3638 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 426
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.95 CRITERION= .3690
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9977E-01 CRITERION= .3636 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 427
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1626E-04 OSCILLATION LIMIT = 12.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.64 CRITERION= .3688
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9947E-01 CRITERION= .3631 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 428
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.98 CRITERION= .3684
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9949E-01 CRITERION= .3629 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 429
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1623E-04 OSCILLATION LIMIT = 12.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.68 CRITERION= .3681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9929E-01 CRITERION= .3624 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 430
 *** TIME = .599595E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1632E-04 OSCILLATION LIMIT = 12.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 62.01 CRITERION= .3677
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9931E-01 CRITERION= .3622 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 431
 *** TIME = .607484E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1621E-04 OSCILLATION LIMIT = 12.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.71 CRITERION= .3674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9909E-01 CRITERION= .3618 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 432
 *** TIME = .615374E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 62.04 CRITERION= .3670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9915E-01 CRITERION= .3615 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 39 COMPLETED. CUM ITER = 433
 *** TIME = .623263E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1618E-04 OSCILLATION LIMIT = 12.76

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.74 CRITERION= .3668
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9899E-01 CRITERION= .3611 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 40 COMPLETED. CUM ITER = 434
 *** TIME = .631152E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1626E-04 OSCILLATION LIMIT = 12.83

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:04:39 JUN 18, 1995 CP= 23526.380
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 33.19 CRITERION= .3626
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4811E-01 CRITERION= .3609 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 1 COMPLETED. CUM ITER = 435
 *** TIME = .639042E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4570E-04 OSCILLATION LIMIT = 36.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.87 CRITERION= .3623
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4837E-01 CRITERION= .3604 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 2 COMPLETED. CUM ITER = 436
 *** TIME = .646931E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4312E-04 OSCILLATION LIMIT = 34.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.20 CRITERION= .3619
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4930E-01 CRITERION= .3603 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 3 COMPLETED. CUM ITER = 437
 *** TIME = .654821E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3570E-04 OSCILLATION LIMIT = 28.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.88 CRITERION= .3618
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4836E-01 CRITERION= .3599 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 4 COMPLETED. CUM ITER = 438
 *** TIME = .662710E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4293E-04 OSCILLATION LIMIT = 33.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.21 CRITERION= .3614
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4913E-01 CRITERION= .3597 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 439
 *** TIME = .670599E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3650E-04 OSCILLATION LIMIT = 28.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.89 CRITERION= .3612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4837E-01 CRITERION= .3593 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 440

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*** TIME = .678489E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4215E-04    OSCILLATION LIMIT = 33.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.22    CRITERION= .3608
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4900E-01    CRITERION= .3591    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 441
*** TIME = .686378E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3713E-04    OSCILLATION LIMIT = 29.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.90    CRITERION= .3606
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4836E-01    CRITERION= .3587    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 442
*** TIME = .694268E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4154E-04    OSCILLATION LIMIT = 32.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.23    CRITERION= .3602
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4888E-01    CRITERION= .3585    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 443
*** TIME = .702157E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3760E-04    OSCILLATION LIMIT = 29.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.91    CRITERION= .3600
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4833E-01    CRITERION= .3581    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 444
*** TIME = .710046E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4108E-04    OSCILLATION LIMIT = 32.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.23    CRITERION= .3596
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4876E-01    CRITERION= .3579    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 445
*** TIME = .717936E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3794E-04    OSCILLATION LIMIT = 29.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.92    CRITERION= .3595
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4829E-01    CRITERION= .3575    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 446
*** TIME = .725825E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4073E-04    OSCILLATION LIMIT = 32.13
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.24    CRITERION= .3591
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4865E-01    CRITERION= .3574    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 447
*** TIME = .733715E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3820E-04    OSCILLATION LIMIT = 30.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.93    CRITERION= .3589
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4824E-01    CRITERION= .3570    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 448
*** TIME = .741604E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4045E-04 OSCILLATION LIMIT = 31.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.25 CRITERION= .3585
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4856E-01 CRITERION= .3568 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 449
*** TIME = .749493E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3838E-04 OSCILLATION LIMIT = 30.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.93 CRITERION= .3583
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4819E-01 CRITERION= .3564 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 450
*** TIME = .757383E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4024E-04 OSCILLATION LIMIT = 31.74
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.26 CRITERION= .3579
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3562 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 451
*** TIME = .765272E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3852E-04 OSCILLATION LIMIT = 30.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.94 CRITERION= .3577
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4813E-01 CRITERION= .3558 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 452
*** TIME = .773162E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4006E-04 OSCILLATION LIMIT = 31.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.27 CRITERION= .3573
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4838E-01 CRITERION= .3556 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 453
*** TIME = .781051E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3861E-04 OSCILLATION LIMIT = 30.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.95 CRITERION= .3571
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4807E-01 CRITERION= .3552 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 454
*** TIME = .788940E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3993E-04 OSCILLATION LIMIT = 31.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.28 CRITERION= .3568
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4829E-01 CRITERION= .3550 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 455
*** TIME = .796830E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3868E-04 OSCILLATION LIMIT = 30.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.96 CRITERION= .3566

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4800E-01 CRITERION= .3546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 456
 *** TIME = .804719E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3982E-04 OSCILLATION LIMIT = 31.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.29 CRITERION= .3562
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4821E-01 CRITERION= .3545 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 457
 *** TIME = .812609E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3872E-04 OSCILLATION LIMIT = 30.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4792E-01 CRITERION= .3541 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 458
 *** TIME = .820498E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3973E-04 OSCILLATION LIMIT = 31.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.30 CRITERION= .3556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4812E-01 CRITERION= .3539 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 459
 *** TIME = .828387E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3875E-04 OSCILLATION LIMIT = 30.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4786E-01 CRITERION= .3535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 460
 *** TIME = .836277E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3965E-04 OSCILLATION LIMIT = 31.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.30 CRITERION= .3550
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4804E-01 CRITERION= .3533 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 461
 *** TIME = .844166E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.99 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4779E-01 CRITERION= .3529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 462
 *** TIME = .852056E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3958E-04 OSCILLATION LIMIT = 31.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.31 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4797E-01 CRITERION= .3527 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 463
 *** TIME = .859945E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3877E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.00 CRITERION= .3543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4773E-01 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 464
 *** TIME = .867834E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3952E-04 OSCILLATION LIMIT = 31.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.32 CRITERION= .3539
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4790E-01 CRITERION= .3521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 465
 *** TIME = .875724E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.01 CRITERION= .3537
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4767E-01 CRITERION= .3517 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 466
 *** TIME = .883613E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3947E-04 OSCILLATION LIMIT = 31.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.33 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4782E-01 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 467
 *** TIME = .891503E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.01 CRITERION= .3531
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4759E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 468
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3943E-04 OSCILLATION LIMIT = 31.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.34 CRITERION= .3527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4774E-01 CRITERION= .3510 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 469
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3875E-04 OSCILLATION LIMIT = 30.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.02 CRITERION= .3525
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4752E-01 CRITERION= .3506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 470
 *** TIME = .915171E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3938E-04 OSCILLATION LIMIT = 31.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.35 CRITERION= .3521
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4766E-01 CRITERION= .3504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 471
 *** TIME = .923060E+08 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .3873E-04  OSCILLATION LIMIT = 30.56
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.03  CRITERION= .3520
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
  HT FLOW CONVERGENCE VALUE= .4744E-01 CRITERION= .3500  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 38 COMPLETED.  CUM ITER = 472
*** TIME = .930950E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3934E-04  OSCILLATION LIMIT = 31.04
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.36  CRITERION= .3516
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
  HT FLOW CONVERGENCE VALUE= .4758E-01 CRITERION= .3498  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 39 COMPLETED.  CUM ITER = 473
*** TIME = .938839E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3872E-04  OSCILLATION LIMIT = 30.54
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.04  CRITERION= .3514
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
  HT FLOW CONVERGENCE VALUE= .4737E-01 CRITERION= .3494  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 40 COMPLETED.  CUM ITER = 474
*** TIME = .946728E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3931E-04  OSCILLATION LIMIT = 31.01

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303  VERSION=HP 9000/7XX 22:41:46 JUN 18, 1995 CP= 25726.930
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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  HT FLOW CONVERGENCE VALUE= 20.63  CRITERION= .3500
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
  HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .3493  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 1 COMPLETED.  CUM ITER = 475
*** TIME = .954618E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6600E-04  OSCILLATION LIMIT = 52.07
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.31  CRITERION= .3499
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
  HT FLOW CONVERGENCE VALUE= .2805E-01 CRITERION= .3489  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 2 COMPLETED.  CUM ITER = 476
*** TIME = .962507E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6599E-04  OSCILLATION LIMIT = 52.06
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.64  CRITERION= .3495
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
  HT FLOW CONVERGENCE VALUE= .2823E-01 CRITERION= .3488  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 3 COMPLETED.  CUM ITER = 477
*** TIME = .970397E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6197E-04  OSCILLATION LIMIT = 48.89
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.32  CRITERION= .3494
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
  HT FLOW CONVERGENCE VALUE= .2802E-01 CRITERION= .3484  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 478
*** TIME = .978286E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6590E-04 OSCILLATION LIMIT = 51.99
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.64 CRITERION= .3490
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .3483 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 479
*** TIME = .986175E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6229E-04 OSCILLATION LIMIT = 49.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3489
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2798E-01 CRITERION= .3479 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 480
*** TIME = .994065E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6562E-04 OSCILLATION LIMIT = 51.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.64 CRITERION= .3485
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2814E-01 CRITERION= .3478 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 481
*** TIME = .100195E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6254E-04 OSCILLATION LIMIT = 49.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3483
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3474 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 482
*** TIME = .100984E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6540E-04 OSCILLATION LIMIT = 51.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3480
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2809E-01 CRITERION= .3473 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 483
*** TIME = .101773E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6272E-04 OSCILLATION LIMIT = 49.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3478
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2790E-01 CRITERION= .3469 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 484
*** TIME = .102562E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6523E-04 OSCILLATION LIMIT = 51.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
HT FLOW CONVERGENCE VALUE= .2805E-01 CRITERION= .3468 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 485
*** TIME = .103351E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6286E-04 OSCILLATION LIMIT = 49.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3473
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01

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HT FLOW CONVERGENCE VALUE= .2786E-01 CRITERION= .3464 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 486
 *** TIME = .104140E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6509E-04 OSCILLATION LIMIT = 51.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3470
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2801E-01 CRITERION= .3462 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 487
 *** TIME = .104929E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6296E-04 OSCILLATION LIMIT = 49.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 488
 *** TIME = .105718E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6498E-04 OSCILLATION LIMIT = 51.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2797E-01 CRITERION= .3457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 489
 *** TIME = .106507E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6304E-04 OSCILLATION LIMIT = 49.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2778E-01 CRITERION= .3454 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 490
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6489E-04 OSCILLATION LIMIT = 51.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2792E-01 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 491
 *** TIME = .108085E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6309E-04 OSCILLATION LIMIT = 49.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2774E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 492
 *** TIME = .108874E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6482E-04 OSCILLATION LIMIT = 51.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3455
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2788E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 493
 *** TIME = .109663E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6313E-04 OSCILLATION LIMIT = 49.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3453
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2770E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 494
 *** TIME = .110452E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6476E-04 OSCILLATION LIMIT = 51.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2784E-01 CRITERION= .3442 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 495
 *** TIME = .111241E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6316E-04 OSCILLATION LIMIT = 49.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2766E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 496
 *** TIME = .112030E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6471E-04 OSCILLATION LIMIT = 51.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2780E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 497
 *** TIME = .112818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6318E-04 OSCILLATION LIMIT = 49.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3443
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2762E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 498
 *** TIME = .113607E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6467E-04 OSCILLATION LIMIT = 51.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2776E-01 CRITERION= .3432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 25 COMPLETED. CUM ITER = 499
 *** TIME = .114396E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6320E-04 OSCILLATION LIMIT = 49.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2758E-01 CRITERION= .3429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 26 COMPLETED. CUM ITER = 500
 *** TIME = .115185E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6463E-04 OSCILLATION LIMIT = 50.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3435
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3427 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 27 COMPLETED. CUM ITER = 501
 *** TIME = .115974E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2754E-01 CRITERION= .3423 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 28 COMPLETED. CUM ITER = 502
 *** TIME = .116763E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6460E-04 OSCILLATION LIMIT = 50.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3430
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2768E-01 CRITERION= .3422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 29 COMPLETED. CUM ITER = 503
 *** TIME = .117552E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2750E-01 CRITERION= .3418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 30 COMPLETED. CUM ITER = 504
 *** TIME = .118341E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6457E-04 OSCILLATION LIMIT = 50.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3425
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2763E-01 CRITERION= .3417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 31 COMPLETED. CUM ITER = 505
 *** TIME = .119130E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2747E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 506
 *** TIME = .119919E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6454E-04 OSCILLATION LIMIT = 50.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.69 CRITERION= .3420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2759E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 507
 *** TIME = .120708E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.37 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2743E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 508
 *** TIME = .121497E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6451E-04 OSCILLATION LIMIT = 50.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.69 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2755E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 509

*** TIME = .122286E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.37 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2738E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 510
 *** TIME = .123075E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6449E-04 OSCILLATION LIMIT = 50.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.69 CRITERION= .3409
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2751E-01 CRITERION= .3402 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 511
 *** TIME = .123864E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.37 CRITERION= .3408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2734E-01 CRITERION= .3398 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 512
 *** TIME = .124653E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6446E-04 OSCILLATION LIMIT = 50.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.70 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2746E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 513
 *** TIME = .125441E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.38 CRITERION= .3403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2730E-01 CRITERION= .3393 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 514
 *** TIME = .126230E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6444E-04 OSCILLATION LIMIT = 50.84

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:19:46 JUN 18, 1995 CP= 27947.470
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4451E-01
 HT FLOW CONVERGENCE VALUE= .1894E-01 CRITERION= .3392 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 515
 *** TIME = .127019E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7372E-04 OSCILLATION LIMIT = 58.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.59 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4317E-01
 HT FLOW CONVERGENCE VALUE= .1874E-01 CRITERION= .3389 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 516
*** TIME = .127808E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7496E-04 OSCILLATION LIMIT = 59.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3392
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4238E-01
HT FLOW CONVERGENCE VALUE= .1877E-01 CRITERION= .3388 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 517
*** TIME = .128597E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7306E-04 OSCILLATION LIMIT = 57.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4330E-01
HT FLOW CONVERGENCE VALUE= .1872E-01 CRITERION= .3385 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 518
*** TIME = .129386E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7494E-04 OSCILLATION LIMIT = 59.12
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4254E-01
HT FLOW CONVERGENCE VALUE= .1875E-01 CRITERION= .3384 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 519
*** TIME = .130175E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7309E-04 OSCILLATION LIMIT = 57.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3386
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4315E-01
HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .3380 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 520
*** TIME = .130964E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7491E-04 OSCILLATION LIMIT = 59.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3383
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4267E-01
HT FLOW CONVERGENCE VALUE= .1874E-01 CRITERION= .3379 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 521
*** TIME = .131753E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7312E-04 OSCILLATION LIMIT = 57.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3382
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1865E-01 CRITERION= .3376 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 522
*** TIME = .132542E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7489E-04 OSCILLATION LIMIT = 59.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3379
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4277E-01
HT FLOW CONVERGENCE VALUE= .1872E-01 CRITERION= .3375 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 523
*** TIME = .133331E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7314E-04 OSCILLATION LIMIT = 57.70
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3378

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4295E-01
 HT FLOW CONVERGENCE VALUE= .1862E-01 CRITERION= .3372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 524
 *** TIME = .134120E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7486E-04 OSCILLATION LIMIT = 59.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3374
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4285E-01
 HT FLOW CONVERGENCE VALUE= .1870E-01 CRITERION= .3371 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 525
 *** TIME = .134909E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7316E-04 OSCILLATION LIMIT = 57.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3373
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4289E-01
 HT FLOW CONVERGENCE VALUE= .1859E-01 CRITERION= .3367 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 526
 *** TIME = .135698E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7484E-04 OSCILLATION LIMIT = 59.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4290E-01
 HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .3366 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 527
 *** TIME = .136487E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7317E-04 OSCILLATION LIMIT = 57.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4285E-01
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .3363 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 528
 *** TIME = .137276E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7483E-04 OSCILLATION LIMIT = 59.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3366
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4294E-01
 HT FLOW CONVERGENCE VALUE= .1865E-01 CRITERION= .3362 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 529
 *** TIME = .138065E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7318E-04 OSCILLATION LIMIT = 57.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
 HT FLOW CONVERGENCE VALUE= .1854E-01 CRITERION= .3359 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 530
 *** TIME = .138853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7481E-04 OSCILLATION LIMIT = 59.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4297E-01
 HT FLOW CONVERGENCE VALUE= .1863E-01 CRITERION= .3358 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 531
 *** TIME = .139642E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7319E-04 OSCILLATION LIMIT = 57.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3360
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .3354 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 532
 *** TIME = .140431E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7479E-04 OSCILLATION LIMIT = 59.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3357
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299E-01
 HT FLOW CONVERGENCE VALUE= .1861E-01 CRITERION= .3353 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 533
 *** TIME = .141220E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7320E-04 OSCILLATION LIMIT = 57.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3356
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .3350 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 534
 *** TIME = .142009E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7478E-04 OSCILLATION LIMIT = 59.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4301E-01
 HT FLOW CONVERGENCE VALUE= .1858E-01 CRITERION= .3349 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 535
 *** TIME = .142798E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7320E-04 OSCILLATION LIMIT = 57.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3352
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3346 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 536
 *** TIME = .143587E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7476E-04 OSCILLATION LIMIT = 58.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3348
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4302E-01
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .3345 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 537
 *** TIME = .144376E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7321E-04 OSCILLATION LIMIT = 57.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3347
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3341 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 538
 *** TIME = .145165E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7475E-04 OSCILLATION LIMIT = 58.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
 HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .3340 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 539
 *** TIME = .145954E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .7321E-04 OSCILLATION LIMIT = 57.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3343
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
 HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3337 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 540
 *** TIME = .146743E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7474E-04 OSCILLATION LIMIT = 58.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3340
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
 HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .3336 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 541
 *** TIME = .147532E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3339
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .3333 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 542
 *** TIME = .148321E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7473E-04 OSCILLATION LIMIT = 58.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4304E-01
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .3332 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 543
 *** TIME = .149110E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3335
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1836E-01 CRITERION= .3328 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 544
 *** TIME = .149899E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7471E-04 OSCILLATION LIMIT = 58.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3331
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3327 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 545
 *** TIME = .150688E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3330
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4282E-01
 HT FLOW CONVERGENCE VALUE= .1834E-01 CRITERION= .3324 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 546
 *** TIME = .151477E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7470E-04 OSCILLATION LIMIT = 58.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3327
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3323 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 547
*** TIME = .152265E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3326
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4282E-01
HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .3320 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 548
*** TIME = .153054E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7469E-04 OSCILLATION LIMIT = 58.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3323
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3319 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 549
*** TIME = .153843E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3322
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
HT FLOW CONVERGENCE VALUE= .1829E-01 CRITERION= .3316 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 550
*** TIME = .154632E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7468E-04 OSCILLATION LIMIT = 58.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3318
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .3315 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 551
*** TIME = .155421E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3317
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .3311 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 552
*** TIME = .156210E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7467E-04 OSCILLATION LIMIT = 58.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3314
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1836E-01 CRITERION= .3310 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 553
*** TIME = .156999E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3313
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4284E-01
HT FLOW CONVERGENCE VALUE= .1824E-01 CRITERION= .3307 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 554
*** TIME = .157788E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7466E-04 OSCILLATION LIMIT = 58.90

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***** ANSYS SOLVE... COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:58:19 JUN 18, 1995 CP= 30188.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.439 CRITERION= .3308
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5522E-01
 HT FLOW CONVERGENCE VALUE= .1572E-01 CRITERION= .3306 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 555
 *** TIME = .158577E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6768E-04 OSCILLATION LIMIT = 53.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.119 CRITERION= .3307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5464E-01
 HT FLOW CONVERGENCE VALUE= .1562E-01 CRITERION= .3302 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 556
 *** TIME = .159366E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6852E-04 OSCILLATION LIMIT = 54.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.440 CRITERION= .3304
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5287E-01
 HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3301 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 557
 *** TIME = .160155E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6854E-04 OSCILLATION LIMIT = 54.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.120 CRITERION= .3303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5464E-01
 HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .3298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 558
 *** TIME = .160944E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6857E-04 OSCILLATION LIMIT = 54.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.440 CRITERION= .3299
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5314E-01
 HT FLOW CONVERGENCE VALUE= .1534E-01 CRITERION= .3297 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 559
 *** TIME = .161733E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6844E-04 OSCILLATION LIMIT = 53.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.121 CRITERION= .3298
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5442E-01
 HT FLOW CONVERGENCE VALUE= .1552E-01 CRITERION= .3294 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 560
 *** TIME = .162522E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6866E-04 OSCILLATION LIMIT = 54.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.441 CRITERION= .3295
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5335E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3293 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 561
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6835E-04 OSCILLATION LIMIT = 53.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.122 CRITERION= .3294
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5426E-01
 HT FLOW CONVERGENCE VALUE= .1547E-01 CRITERION= .3289 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 562
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6874E-04 OSCILLATION LIMIT = 54.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.442 CRITERION= .3290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5351E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 563
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6829E-04 OSCILLATION LIMIT = 53.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.122 CRITERION= .3289
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5413E-01
 HT FLOW CONVERGENCE VALUE= .1542E-01 CRITERION= .3285 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 564
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6879E-04 OSCILLATION LIMIT = 54.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.442 CRITERION= .3286
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5363E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3284 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 565
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6824E-04 OSCILLATION LIMIT = 53.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.123 CRITERION= .3285
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5404E-01
 HT FLOW CONVERGENCE VALUE= .1539E-01 CRITERION= .3280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 566
 *** TIME = .167255E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6882E-04 OSCILLATION LIMIT = 54.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.443 CRITERION= .3282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5372E-01
 HT FLOW CONVERGENCE VALUE= .1534E-01 CRITERION= .3279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 567
 *** TIME = .168044E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6821E-04 OSCILLATION LIMIT = 53.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.124 CRITERION= .3281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5398E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3276 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 568
 *** TIME = .168833E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6885E-04 OSCILLATION LIMIT = 54.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.444 CRITERION= .3277
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5378E-01
 HT FLOW CONVERGENCE VALUE= .1533E-01 CRITERION= .3275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 569
 *** TIME = .169622E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6818E-04 OSCILLATION LIMIT = 53.79

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.124 CRITERION= .3276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5393E-01
 HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 570
 *** TIME = .170411E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.444 CRITERION= .3273
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5384E-01
 HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3271 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 571
 *** TIME = .171200E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6816E-04 OSCILLATION LIMIT = 53.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.125 CRITERION= .3272
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5390E-01
 HT FLOW CONVERGENCE VALUE= .1530E-01 CRITERION= .3267 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 572
 *** TIME = .171989E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.445 CRITERION= .3268
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
 HT FLOW CONVERGENCE VALUE= .1530E-01 CRITERION= .3266 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 573
 *** TIME = .172778E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6814E-04 OSCILLATION LIMIT = 53.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.126 CRITERION= .3267
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
 HT FLOW CONVERGENCE VALUE= .1527E-01 CRITERION= .3263 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 574
 *** TIME = .173567E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.445 CRITERION= .3264
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5391E-01
 HT FLOW CONVERGENCE VALUE= .1529E-01 CRITERION= .3262 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 575
 *** TIME = .174356E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6813E-04 OSCILLATION LIMIT = 53.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.127 CRITERION= .3263
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
 HT FLOW CONVERGENCE VALUE= .1525E-01 CRITERION= .3258 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 576
 *** TIME = .175145E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.446 CRITERION= .3260
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5393E-01
 HT FLOW CONVERGENCE VALUE= .1527E-01 CRITERION= .3257 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 577

*** TIME = .175934E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6812E-04 OSCILLATION LIMIT = 53.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.127 CRITERION= .3258
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
 HT FLOW CONVERGENCE VALUE= .1522E-01 CRITERION= .3254 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 578
 *** TIME = .176723E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.447 CRITERION= .3255
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5395E-01
 HT FLOW CONVERGENCE VALUE= .1526E-01 CRITERION= .3253 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 579
 *** TIME = .177512E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6812E-04 OSCILLATION LIMIT = 53.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.128 CRITERION= .3254
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5386E-01
 HT FLOW CONVERGENCE VALUE= .1520E-01 CRITERION= .3249 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 580
 *** TIME = .178300E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.447 CRITERION= .3251
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5396E-01
 HT FLOW CONVERGENCE VALUE= .1524E-01 CRITERION= .3248 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 581
 *** TIME = .179089E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6811E-04 OSCILLATION LIMIT = 53.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.129 CRITERION= .3250
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
 HT FLOW CONVERGENCE VALUE= .1518E-01 CRITERION= .3245 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 582
 *** TIME = .179878E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.448 CRITERION= .3246
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5398E-01
 HT FLOW CONVERGENCE VALUE= .1522E-01 CRITERION= .3244 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 583
 *** TIME = .180667E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6811E-04 OSCILLATION LIMIT = 53.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.130 CRITERION= .3245
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
 HT FLOW CONVERGENCE VALUE= .1516E-01 CRITERION= .3241 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 584
 *** TIME = .181456E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.449 CRITERION= .3242
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5399E-01
 HT FLOW CONVERGENCE VALUE= .1520E-01 CRITERION= .3240 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 585
*** TIME = .182245E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.130 CRITERION= .3241
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
HT FLOW CONVERGENCE VALUE= .1514E-01 CRITERION= .3236 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 586
*** TIME = .183034E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.449 CRITERION= .3238
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5400E-01
HT FLOW CONVERGENCE VALUE= .1518E-01 CRITERION= .3235 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 587
*** TIME = .183823E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.131 CRITERION= .3236
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
HT FLOW CONVERGENCE VALUE= .1512E-01 CRITERION= .3232 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 588
*** TIME = .184612E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.450 CRITERION= .3233
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5400E-01
HT FLOW CONVERGENCE VALUE= .1516E-01 CRITERION= .3231 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 589
*** TIME = .185401E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.132 CRITERION= .3232
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5389E-01
HT FLOW CONVERGENCE VALUE= .1510E-01 CRITERION= .3227 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 590
*** TIME = .186190E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.451 CRITERION= .3229
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5401E-01
HT FLOW CONVERGENCE VALUE= .1514E-01 CRITERION= .3226 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 591
*** TIME = .186979E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6809E-04 OSCILLATION LIMIT = 53.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.132 CRITERION= .3228
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5390E-01
HT FLOW CONVERGENCE VALUE= .1508E-01 CRITERION= .3223 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 592
*** TIME = .187768E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.451 CRITERION= .3224

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5402E-01
 HT FLOW CONVERGENCE VALUE= .1513E-01 CRITERION= .3222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 593
 *** TIME = .188557E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6809E-04 OSCILLATION LIMIT = 53.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.133 CRITERION= .3223
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5391E-01
 HT FLOW CONVERGENCE VALUE= .1506E-01 CRITERION= .3219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 594
 *** TIME = .189346E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6886E-04 OSCILLATION LIMIT = 54.33

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 00:37:05 JUN 19, 1995 CP= 32428.970
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 6.540 CRITERION= .3219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5046E-01
 HT FLOW CONVERGENCE VALUE= .1313E-01 CRITERION= .3218 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 595
 *** TIME = .190135E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6098E-04 OSCILLATION LIMIT = 48.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3218
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4982E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 596
 *** TIME = .190924E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6199E-04 OSCILLATION LIMIT = 48.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.540 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1291E-01 CRITERION= .3214 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 597
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6135E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4992E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3211 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 598
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6196E-04 OSCILLATION LIMIT = 48.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3212
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1290E-01 CRITERION= .3210 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 599
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6135E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993E-01
 HT FLOW CONVERGENCE VALUE= .1286E-01 CRITERION= .3207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 600
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6195E-04 OSCILLATION LIMIT = 48.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3206 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 601
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.223 CRITERION= .3207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4994E-01
 HT FLOW CONVERGENCE VALUE= .1284E-01 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 602
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6195E-04 OSCILLATION LIMIT = 48.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3204
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1286E-01 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 603
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.223 CRITERION= .3203
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4995E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3200 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 604
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6194E-04 OSCILLATION LIMIT = 48.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3200
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1285E-01 CRITERION= .3199 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 605
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4996E-01
 HT FLOW CONVERGENCE VALUE= .1281E-01 CRITERION= .3196 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 606
 *** TIME = .198813E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6194E-04 OSCILLATION LIMIT = 48.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3196
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5012E-01
 HT FLOW CONVERGENCE VALUE= .1283E-01 CRITERION= .3195 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 607
 *** TIME = .199602E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3196
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4997E-01
 HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3192 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 608
 *** TIME = .200391E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6193E-04 OSCILLATION LIMIT = 48.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5012E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 609
 *** TIME = .201180E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3192
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4999E-01
 HT FLOW CONVERGENCE VALUE= .1278E-01 CRITERION= .3188 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 610
 *** TIME = .201969E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6192E-04 OSCILLATION LIMIT = 48.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3189
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
 HT FLOW CONVERGENCE VALUE= .1281E-01 CRITERION= .3187 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 611
 *** TIME = .202758E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3188
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5000E-01
 HT FLOW CONVERGENCE VALUE= .1276E-01 CRITERION= .3184 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 612
 *** TIME = .203547E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6192E-04 OSCILLATION LIMIT = 48.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3185
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
 HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3184 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 613
 *** TIME = .204335E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3184
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5001E-01
 HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3181 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 614
 *** TIME = .205124E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6191E-04 OSCILLATION LIMIT = 48.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3181
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
 HT FLOW CONVERGENCE VALUE= .1278E-01 CRITERION= .3180 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 615
 *** TIME = .205913E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3180
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5002E-01
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3177 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 616
 *** TIME = .206702E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6191E-04 OSCILLATION LIMIT = 48.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5014E-01
 HT FLOW CONVERGENCE VALUE= .1276E-01 CRITERION= .3176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 617
 *** TIME = .207491E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5003E-01
 HT FLOW CONVERGENCE VALUE= .1272E-01 CRITERION= .3173 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 618
 *** TIME = .208280E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6190E-04 OSCILLATION LIMIT = 48.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5014E-01
 HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3172 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 619
 *** TIME = .209069E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5004E-01
 HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 620
 *** TIME = .209858E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6189E-04 OSCILLATION LIMIT = 48.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5015E-01
 HT FLOW CONVERGENCE VALUE= .1273E-01 CRITERION= .3168 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 621
 *** TIME = .210647E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5005E-01
 HT FLOW CONVERGENCE VALUE= .1268E-01 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 622
 *** TIME = .211436E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6189E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5015E-01

HT FLOW CONVERGENCE VALUE= .1271E-01 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 623
 *** TIME = .212225E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.227 CRITERION= .3165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5006E-01
 HT FLOW CONVERGENCE VALUE= .1267E-01 CRITERION= .3161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 624
 *** TIME = .213014E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6188E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5016E-01
 HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 625
 *** TIME = .213803E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.227 CRITERION= .3161
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5007E-01
 HT FLOW CONVERGENCE VALUE= .1265E-01 CRITERION= .3158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 626
 *** TIME = .214592E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6187E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3158
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1268E-01 CRITERION= .3157 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 627
 *** TIME = .215381E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5008E-01
 HT FLOW CONVERGENCE VALUE= .1263E-01 CRITERION= .3154 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 628
 *** TIME = .216170E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6187E-04 OSCILLATION LIMIT = 48.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1266E-01 CRITERION= .3153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 629
 *** TIME = .216959E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5009E-01
 HT FLOW CONVERGENCE VALUE= .1261E-01 CRITERION= .3150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 630
 *** TIME = .217747E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6186E-04 OSCILLATION LIMIT = 48.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5018E-01
 HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .3149 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 631
 *** TIME = .218536E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1259E-01 CRITERION= .3146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 632
 *** TIME = .219325E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6186E-04 OSCILLATION LIMIT = 48.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3147
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5019E-01
 HT FLOW CONVERGENCE VALUE= .1262E-01 CRITERION= .3146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 633
 *** TIME = .220114E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6129E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.229 CRITERION= .3146
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1257E-01 CRITERION= .3142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 634
 *** TIME = .220903E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6185E-04 OSCILLATION LIMIT = 48.80

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:14:47 JUN 19, 1995 CP= 34629.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3143
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1186E-01 CRITERION= .3142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 635
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5926E-04 OSCILLATION LIMIT = 46.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.389 CRITERION= .3142
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4732E-01
 HT FLOW CONVERGENCE VALUE= .1173E-01 CRITERION= .3139 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 636
 *** TIME = .222481E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5997E-04 OSCILLATION LIMIT = 47.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4764E-01
 HT FLOW CONVERGENCE VALUE= .1180E-01 CRITERION= .3138 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 637
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.389 CRITERION= .3139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4737E-01
 HT FLOW CONVERGENCE VALUE= .1172E-01 CRITERION= .3135 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 638
 *** TIME = .224059E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5995E-04 OSCILLATION LIMIT = 47.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3136
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
 HT FLOW CONVERGENCE VALUE= .1178E-01 CRITERION= .3135 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 639
 *** TIME = .224848E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4740E-01
 HT FLOW CONVERGENCE VALUE= .1172E-01 CRITERION= .3132 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 640
 *** TIME = .225637E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5993E-04 OSCILLATION LIMIT = 47.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3132
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
 HT FLOW CONVERGENCE VALUE= .1176E-01 CRITERION= .3131 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 641
 *** TIME = .226426E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3132
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4742E-01
 HT FLOW CONVERGENCE VALUE= .1170E-01 CRITERION= .3128 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 642
 *** TIME = .227215E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5992E-04 OSCILLATION LIMIT = 47.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707 CRITERION= .3129
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
 HT FLOW CONVERGENCE VALUE= .1173E-01 CRITERION= .3128 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 643
 *** TIME = .228004E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3128
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4744E-01
 HT FLOW CONVERGENCE VALUE= .1167E-01 CRITERION= .3125 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 644
 *** TIME = .228793E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5991E-04 OSCILLATION LIMIT = 47.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707 CRITERION= .3125
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
 HT FLOW CONVERGENCE VALUE= .1171E-01 CRITERION= .3124 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 645

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*** TIME = .229582E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.390    CRITERION= .3124
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4746E-01
    HT FLOW CONVERGENCE VALUE= .1166E-01    CRITERION= .3121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 12 COMPLETED.    CUM ITER = 646
*** TIME = .230371E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5990E-04    OSCILLATION LIMIT = 47.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3122
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1170E-01    CRITERION= .3121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 13 COMPLETED.    CUM ITER = 647
*** TIME = .231159E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3121
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4748E-01
    HT FLOW CONVERGENCE VALUE= .1164E-01    CRITERION= .3118    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 14 COMPLETED.    CUM ITER = 648
*** TIME = .231948E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5989E-04    OSCILLATION LIMIT = 47.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3118
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1168E-01    CRITERION= .3117    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 15 COMPLETED.    CUM ITER = 649
*** TIME = .232737E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3117
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4749E-01
    HT FLOW CONVERGENCE VALUE= .1163E-01    CRITERION= .3114    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 16 COMPLETED.    CUM ITER = 650
*** TIME = .233526E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5988E-04    OSCILLATION LIMIT = 47.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3115
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1166E-01    CRITERION= .3113    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 17 COMPLETED.    CUM ITER = 651
*** TIME = .234315E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3114
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4750E-01
    HT FLOW CONVERGENCE VALUE= .1161E-01    CRITERION= .3111    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 18 COMPLETED.    CUM ITER = 652
*** TIME = .235104E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5987E-04    OSCILLATION LIMIT = 47.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.708    CRITERION= .3111
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1165E-01    CRITERION= .3110    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 653
*** TIME = .235893E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3110
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4751E-01
HT FLOW CONVERGENCE VALUE= .1160E-01 CRITERION= .3107 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 654
*** TIME = .236682E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5987E-04 OSCILLATION LIMIT = 47.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3107
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
HT FLOW CONVERGENCE VALUE= .1164E-01 CRITERION= .3106 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 655
*** TIME = .237471E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3107
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4752E-01
HT FLOW CONVERGENCE VALUE= .1159E-01 CRITERION= .3103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 656
*** TIME = .238260E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5986E-04 OSCILLATION LIMIT = 47.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3104
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
HT FLOW CONVERGENCE VALUE= .1163E-01 CRITERION= .3103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 657
*** TIME = .239049E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3103
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4753E-01
HT FLOW CONVERGENCE VALUE= .1158E-01 CRITERION= .3100 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 658
*** TIME = .239838E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5986E-04 OSCILLATION LIMIT = 47.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3100
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
HT FLOW CONVERGENCE VALUE= .1161E-01 CRITERION= .3099 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 659
*** TIME = .240627E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3100
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4754E-01
HT FLOW CONVERGENCE VALUE= .1156E-01 CRITERION= .3096 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 660
*** TIME = .241416E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5985E-04 OSCILLATION LIMIT = 47.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3097

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
 HT FLOW CONVERGENCE VALUE= .1159E-01 CRITERION= .3096 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 661
 *** TIME = .242205E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3096
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4755E-01
 HT FLOW CONVERGENCE VALUE= .1155E-01 CRITERION= .3093 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 662
 *** TIME = .242994E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5984E-04 OSCILLATION LIMIT = 47.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3093
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
 HT FLOW CONVERGENCE VALUE= .1158E-01 CRITERION= .3092 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 663
 *** TIME = .243782E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3093
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4756E-01
 HT FLOW CONVERGENCE VALUE= .1154E-01 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 664
 *** TIME = .244571E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5984E-04 OSCILLATION LIMIT = 47.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3090
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
 HT FLOW CONVERGENCE VALUE= .1157E-01 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 665
 *** TIME = .245360E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3089
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4757E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3086 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 666
 *** TIME = .246149E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5983E-04 OSCILLATION LIMIT = 47.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3086
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
 HT FLOW CONVERGENCE VALUE= .1156E-01 CRITERION= .3085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 667
 *** TIME = .246938E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3086
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 668
 *** TIME = .247727E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5983E-04 OSCILLATION LIMIT = 47.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3083
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4763E-01
 HT FLOW CONVERGENCE VALUE= .1155E-01 CRITERION= .3082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 669
 *** TIME = .248516E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1150E-01 CRITERION= .3079 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 670
 *** TIME = .249305E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5982E-04 OSCILLATION LIMIT = 47.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4763E-01
 HT FLOW CONVERGENCE VALUE= .1154E-01 CRITERION= .3078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 671
 *** TIME = .250094E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5932E-04 OSCILLATION LIMIT = 46.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
 HT FLOW CONVERGENCE VALUE= .1149E-01 CRITERION= .3075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 672
 *** TIME = .250883E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5981E-04 OSCILLATION LIMIT = 47.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3076
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4764E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 673
 *** TIME = .251672E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5932E-04 OSCILLATION LIMIT = 46.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
 HT FLOW CONVERGENCE VALUE= .1147E-01 CRITERION= .3072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 674
 *** TIME = .252461E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5981E-04 OSCILLATION LIMIT = 47.19

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:52:28 JUN 19, 1995 CP= 36829.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3072
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6105E-01
 HT FLOW CONVERGENCE VALUE= .1724E-01 CRITERION= .3071 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 675
 *** TIME = .253250E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2590E-04 OSCILLATION LIMIT = 20.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6036E-01
 HT FLOW CONVERGENCE VALUE= .1708E-01 CRITERION= .3068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 676
 *** TIME = .254039E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2593E-04 OSCILLATION LIMIT = 20.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5802E-01
 HT FLOW CONVERGENCE VALUE= .1640E-01 CRITERION= .3068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 677
 *** TIME = .254828E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2575E-04 OSCILLATION LIMIT = 20.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6036E-01
 HT FLOW CONVERGENCE VALUE= .1702E-01 CRITERION= .3065 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 678
 *** TIME = .255617E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2594E-04 OSCILLATION LIMIT = 20.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3065
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5836E-01
 HT FLOW CONVERGENCE VALUE= .1646E-01 CRITERION= .3064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 679
 *** TIME = .256406E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2577E-04 OSCILLATION LIMIT = 20.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3064
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6007E-01
 HT FLOW CONVERGENCE VALUE= .1694E-01 CRITERION= .3062 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 680
 *** TIME = .257194E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2591E-04 OSCILLATION LIMIT = 20.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5863E-01
 HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .3061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 681
 *** TIME = .257983E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2580E-04 OSCILLATION LIMIT = 20.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5986E-01
 HT FLOW CONVERGENCE VALUE= .1688E-01 CRITERION= .3058 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 682
 *** TIME = .258772E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2589E-04 OSCILLATION LIMIT = 20.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3058
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5883E-01
 HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3058 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 683
*** TIME = .259561E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3058
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5971E-01
HT FLOW CONVERGENCE VALUE= .1681E-01 CRITERION= .3055 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 684
*** TIME = .260350E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2587E-04 OSCILLATION LIMIT = 20.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3055
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5899E-01
HT FLOW CONVERGENCE VALUE= .1653E-01 CRITERION= .3055 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 685
*** TIME = .261139E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3055
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5960E-01
HT FLOW CONVERGENCE VALUE= .1677E-01 CRITERION= .3052 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 686
*** TIME = .261928E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2586E-04 OSCILLATION LIMIT = 20.40
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3052
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5911E-01
HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3051 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 687
*** TIME = .262717E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3051
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5952E-01
HT FLOW CONVERGENCE VALUE= .1673E-01 CRITERION= .3048 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 688
*** TIME = .263506E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3048
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5920E-01
HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3048 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 689
*** TIME = .264295E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3048
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5946E-01
HT FLOW CONVERGENCE VALUE= .1670E-01 CRITERION= .3045 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 690
*** TIME = .265084E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3045
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5928E-01

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HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 691
 *** TIME = .265873E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5943E-01
 HT FLOW CONVERGENCE VALUE= .1668E-01 CRITERION= .3042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 692
 *** TIME = .266662E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5933E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3041 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 693
 *** TIME = .267451E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .3039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 694
 *** TIME = .268240E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3039
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 695
 *** TIME = .269029E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5939E-01
 HT FLOW CONVERGENCE VALUE= .1664E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 696
 *** TIME = .269818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5941E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 697
 *** TIME = .270606E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .3032 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 698
 *** TIME = .271395E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5944E-01
 HT FLOW CONVERGENCE VALUE= .1653E-01 CRITERION= .3031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 699
 *** TIME = .272184E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1659E-01 CRITERION= .3029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 700
 *** TIME = .272973E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3029
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5946E-01
 HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3028 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 701
 *** TIME = .273762E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1658E-01 CRITERION= .3025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 702
 *** TIME = .274551E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5949E-01
 HT FLOW CONVERGENCE VALUE= .1651E-01 CRITERION= .3025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 703
 *** TIME = .275340E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5939E-01
 HT FLOW CONVERGENCE VALUE= .1656E-01 CRITERION= .3022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 704
 *** TIME = .276129E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5950E-01
 HT FLOW CONVERGENCE VALUE= .1649E-01 CRITERION= .3022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 705
 *** TIME = .276918E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 32 COMPLETED. CUM ITER = 706
 *** TIME = .277707E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5951E-01
 HT FLOW CONVERGENCE VALUE= .1648E-01 CRITERION= .3018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 33 COMPLETED. CUM ITER = 707
 *** TIME = .278496E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
 HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 34 COMPLETED. CUM ITER = 708
 *** TIME = .279285E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3015
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5952E-01
 HT FLOW CONVERGENCE VALUE= .1646E-01 CRITERION= .3015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 35 COMPLETED. CUM ITER = 709
 *** TIME = .280074E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3015
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5941E-01
 HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .3012 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 36 COMPLETED. CUM ITER = 710
 *** TIME = .280863E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3012
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5954E-01
 HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .3012 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 37 COMPLETED. CUM ITER = 711
 *** TIME = .281652E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.180 CRITERION= .3012
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5943E-01
 HT FLOW CONVERGENCE VALUE= .1649E-01 CRITERION= .3009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 38 COMPLETED. CUM ITER = 712
 *** TIME = .282441E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5955E-01
 HT FLOW CONVERGENCE VALUE= .1644E-01 CRITERION= .3008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 713
 *** TIME = .283229E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.180 CRITERION= .3008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5944E-01
 HT FLOW CONVERGENCE VALUE= .1647E-01 CRITERION= .3006 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 714

*** TIME = .284018E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2580E-04 OSCILLATION LIMIT = 20.36
 Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09
 TIME= .31558E+09

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
 LOAD LABELS = TEMP
 VALUES = 129.27 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
 LOAD LABELS = TEMP
 VALUES = 130.14 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
 LOAD LABELS = TEMP
 VALUES = 132.34 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
 CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 39032.550 TIME= 02:30:32
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
 procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 02:30:32 JUN 19, 1995 CP= 39032.550
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
 TIME AT END OF THE LOAD STEP. 31558E+09
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 10
 MAXIMUM NUMBER OF SUBSTEPS 40
 MINIMUM NUMBER OF SUBSTEPS 5
 START WITH TIME STEP FROM PREVIOUS SUBSTEP YES
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25

STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS
 THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3006
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031E-01
 HT FLOW CONVERGENCE VALUE= .1428E-01 CRITERION= .3005 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 715
 *** TIME = .284807E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.237 CRITERION= .3005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4983E-01
 HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 716
 *** TIME = .285596E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5112E-01
 HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 717
 *** TIME = .286385E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2466E-04 OSCILLATION LIMIT = 19.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.237 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 718
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5099E-01
 HT FLOW CONVERGENCE VALUE= .1427E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 719
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2464E-04 OSCILLATION LIMIT = 19.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5007E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 720
 *** TIME = .288752E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2450E-04 OSCILLATION LIMIT = 19.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5089E-01

HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 721
 *** TIME = .289541E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2463E-04 OSCILLATION LIMIT = 19.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 722
 *** TIME = .290330E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2451E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2995
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5081E-01
 HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .2994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 723
 *** TIME = .291119E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2462E-04 OSCILLATION LIMIT = 19.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2994
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5025E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 724
 *** TIME = .291908E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5076E-01
 HT FLOW CONVERGENCE VALUE= .1420E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 725
 *** TIME = .292697E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2461E-04 OSCILLATION LIMIT = 19.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 726
 *** TIME = .293486E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5072E-01
 HT FLOW CONVERGENCE VALUE= .1418E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 727
 *** TIME = .294275E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 19.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5036E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 728
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5070E-01
 HT FLOW CONVERGENCE VALUE= .1416E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 729
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 19.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5040E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2984 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 730
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2984
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 731
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5044E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 732
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 733
 *** TIME = .299008E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5047E-01
 HT FLOW CONVERGENCE VALUE= .1413E-01 CRITERION= .2978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 20 COMPLETED. CUM ITER = 734
 *** TIME = .299797E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .2978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 21 COMPLETED. CUM ITER = 735
 *** TIME = .300586E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5049E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .2975 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 22 COMPLETED. CUM ITER = 736
 *** TIME = .301375E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2975 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 23 COMPLETED. CUM ITER = 737
 *** TIME = .302164E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5051E-01
 HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2973 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 24 COMPLETED. CUM ITER = 738
 *** TIME = .302953E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2973
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .2972 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 25 COMPLETED. CUM ITER = 739
 *** TIME = .303742E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2972
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5053E-01
 HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2970 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 26 COMPLETED. CUM ITER = 740
 *** TIME = .304531E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .2970 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 741
 *** TIME = .305320E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5055E-01
 HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .2967 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 742
 *** TIME = .306109E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2967
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1408E-01 CRITERION= .2967 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 743
 *** TIME = .306898E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2967
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5056E-01
 HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .2964 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 744

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*** TIME = .307687E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2453E-04    OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.922    CRITERION= .2964
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
    HT FLOW CONVERGENCE VALUE= .1407E-01    CRITERION= .2964    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 31 COMPLETED.    CUM ITER = 745
*** TIME = .308476E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04    OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 2.235    CRITERION= .2964
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5058E-01
    HT FLOW CONVERGENCE VALUE= .1407E-01    CRITERION= .2962    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 32 COMPLETED.    CUM ITER = 746
*** TIME = .309265E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2453E-04    OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.922    CRITERION= .2962
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
    HT FLOW CONVERGENCE VALUE= .1405E-01    CRITERION= .2961    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 33 COMPLETED.    CUM ITER = 747
*** TIME = .310053E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04    OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 2.235    CRITERION= .2961
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5059E-01
    HT FLOW CONVERGENCE VALUE= .1406E-01    CRITERION= .2959    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 34 COMPLETED.    CUM ITER = 748
*** TIME = .310842E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04    OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.922    CRITERION= .2959
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
    HT FLOW CONVERGENCE VALUE= .1404E-01    CRITERION= .2959    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 35 COMPLETED.    CUM ITER = 749
*** TIME = .311631E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04    OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 2.235    CRITERION= .2959
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5060E-01
    HT FLOW CONVERGENCE VALUE= .1405E-01    CRITERION= .2956    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 36 COMPLETED.    CUM ITER = 750
*** TIME = .312420E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04    OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.922    CRITERION= .2956
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
    HT FLOW CONVERGENCE VALUE= .1403E-01    CRITERION= .2956    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 37 COMPLETED.    CUM ITER = 751
*** TIME = .313209E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04    OSCILLATION LIMIT = 19.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 2.235    CRITERION= .2956
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5061E-01
    HT FLOW CONVERGENCE VALUE= .1404E-01    CRITERION= .2953    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 752
*** TIME = .313998E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2953
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5069E-01
HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .2953 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 753
*** TIME = .314787E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2953
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5062E-01
HT FLOW CONVERGENCE VALUE= .1403E-01 CRITERION= .2951 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 754
*** TIME = .315576E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 03:08:13 JUN 19, 1995 CP= 41233.850
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 32.51 CRITERION= .2968
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5506
HT FLOW CONVERGENCE VALUE= .1527 CRITERION= .2939 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 755
*** TIME = .323465E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2051E-04 OSCILLATION LIMIT = 161.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.82 CRITERION= .2956
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4956
HT FLOW CONVERGENCE VALUE= .1462 CRITERION= .2925 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 756
*** TIME = .331355E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1950E-04 OSCILLATION LIMIT = 153.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.50 CRITERION= .2942
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4986
HT FLOW CONVERGENCE VALUE= .1457 CRITERION= .2913 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 757
*** TIME = .339244E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.81 CRITERION= .2931
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4999
HT FLOW CONVERGENCE VALUE= .1454 CRITERION= .2899 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 758
*** TIME = .347134E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 32.50 CRITERION= .2917
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993
 HT FLOW CONVERGENCE VALUE= .1447 CRITERION= .2888 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 759
 *** TIME = .355023E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.81 CRITERION= .2905
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5008
 HT FLOW CONVERGENCE VALUE= .1444 CRITERION= .2874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 760
 *** TIME = .362912E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.49 CRITERION= .2891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5002
 HT FLOW CONVERGENCE VALUE= .1437 CRITERION= .2862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 761
 *** TIME = .370802E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.80 CRITERION= .2880
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017
 HT FLOW CONVERGENCE VALUE= .1434 CRITERION= .2848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 762
 *** TIME = .378691E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.48 CRITERION= .2866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011
 HT FLOW CONVERGENCE VALUE= .1426 CRITERION= .2836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 763
 *** TIME = .386581E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.79 CRITERION= .2855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5027
 HT FLOW CONVERGENCE VALUE= .1422 CRITERION= .2822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 764
 *** TIME = .394470E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.47 CRITERION= .2841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5021
 HT FLOW CONVERGENCE VALUE= .1415 CRITERION= .2811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 765
 *** TIME = .402359E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.78 CRITERION= .2829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5036
 HT FLOW CONVERGENCE VALUE= .1411 CRITERION= .2797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 766
 *** TIME = .410249E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.46 CRITERION= .2815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031
 HT FLOW CONVERGENCE VALUE= .1403 CRITERION= .2785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 767
 *** TIME = .418138E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.77 CRITERION= .2804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5046
 HT FLOW CONVERGENCE VALUE= .1398 CRITERION= .2771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 768
 *** TIME = .426028E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.45 CRITERION= .2790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5041
 HT FLOW CONVERGENCE VALUE= .1389 CRITERION= .2760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 769
 *** TIME = .433917E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.76 CRITERION= .2778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5056
 HT FLOW CONVERGENCE VALUE= .1385 CRITERION= .2746 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 770
 *** TIME = .441806E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.44 CRITERION= .2764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5051
 HT FLOW CONVERGENCE VALUE= .1380 CRITERION= .2734 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 17 COMPLETED. CUM ITER = 771
 *** TIME = .449696E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.75 CRITERION= .2753
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066
 HT FLOW CONVERGENCE VALUE= .1379 CRITERION= .2720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 18 COMPLETED. CUM ITER = 772
 *** TIME = .457585E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.44 CRITERION= .2739
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5062
 HT FLOW CONVERGENCE VALUE= .1371 CRITERION= .2708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 19 COMPLETED. CUM ITER = 773
 *** TIME = .465475E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.75 CRITERION= .2727
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5076
 HT FLOW CONVERGENCE VALUE= .1368 CRITERION= .2694 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 23 SUBSTEP 20 COMPLETED. CUM ITER = 774
*** TIME = .473364E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.43 CRITERION= .2713
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5072
HT FLOW CONVERGENCE VALUE= .1360 CRITERION= .2683 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 21 COMPLETED. CUM ITER = 775
*** TIME = .481253E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.74 CRITERION= .2702
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5086
HT FLOW CONVERGENCE VALUE= .1357 CRITERION= .2669 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 22 COMPLETED. CUM ITER = 776
*** TIME = .489143E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.42 CRITERION= .2688
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5083
HT FLOW CONVERGENCE VALUE= .1349 CRITERION= .2657 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 23 COMPLETED. CUM ITER = 777
*** TIME = .497032E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.73 CRITERION= .2676
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5097
HT FLOW CONVERGENCE VALUE= .1344 CRITERION= .2643 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 778
*** TIME = .504922E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.41 CRITERION= .2662
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5094
HT FLOW CONVERGENCE VALUE= .1335 CRITERION= .2631 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 779
*** TIME = .512811E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.72 CRITERION= .2651
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5108
HT FLOW CONVERGENCE VALUE= .1327 CRITERION= .2617 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 780
*** TIME = .520700E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.40 CRITERION= .2637
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5105
HT FLOW CONVERGENCE VALUE= .1320 CRITERION= .2606 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 781
*** TIME = .528590E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.71 CRITERION= .2626
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5118

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HT FLOW CONVERGENCE VALUE= .1309 CRITERION= .2592 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 782
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.39 CRITERION= .2612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5115
 HT FLOW CONVERGENCE VALUE= .1296 CRITERION= .2580 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 783
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.70 CRITERION= .2600
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5129
 HT FLOW CONVERGENCE VALUE= .1292 CRITERION= .2566 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 784
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.38 CRITERION= .2586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5126
 HT FLOW CONVERGENCE VALUE= .1276 CRITERION= .2554 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 785
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.69 CRITERION= .2575
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139
 HT FLOW CONVERGENCE VALUE= .1252 CRITERION= .2540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 786
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.38 CRITERION= .2561
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5136
 HT FLOW CONVERGENCE VALUE= .1243 CRITERION= .2529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 787
 *** TIME = .575926E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .2549
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5149
 HT FLOW CONVERGENCE VALUE= .1238 CRITERION= .2515 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 788
 *** TIME = .583816E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.37 CRITERION= .2535
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5147
 HT FLOW CONVERGENCE VALUE= .1230 CRITERION= .2503 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 789
 *** TIME = .591705E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .2524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5160
 HT FLOW CONVERGENCE VALUE= .1225 CRITERION= .2489 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 790
 *** TIME = .599594E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.36 CRITERION= .2510
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158
 HT FLOW CONVERGENCE VALUE= .1217 CRITERION= .2477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 791
 *** TIME = .607484E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.67 CRITERION= .2498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5171
 HT FLOW CONVERGENCE VALUE= .1211 CRITERION= .2463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 792
 *** TIME = .615373E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.35 CRITERION= .2484
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5170
 HT FLOW CONVERGENCE VALUE= .1193 CRITERION= .2452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 793
 *** TIME = .623263E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.66 CRITERION= .2473
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5183
 HT FLOW CONVERGENCE VALUE= .1186 CRITERION= .2438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 794
 *** TIME = .631152E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.6

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:45:53 JUN 19, 1995 CP= 43436.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 44.21 CRITERION= .2477
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4240
 HT FLOW CONVERGENCE VALUE= .1088 CRITERION= .2429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 795
 *** TIME = .639041E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1337E-04 OSCILLATION LIMIT = 105.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.51 CRITERION= .2469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4291
 HT FLOW CONVERGENCE VALUE= .1081 CRITERION= .2418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 796
 *** TIME = .646931E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1345E-04 OSCILLATION LIMIT = 106.1

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.19 CRITERION= .2458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299
 HT FLOW CONVERGENCE VALUE= .1078 CRITERION= .2410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 797
 *** TIME = .654820E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1348E-04 OSCILLATION LIMIT = 106.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.50 CRITERION= .2450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4297
 HT FLOW CONVERGENCE VALUE= .1074 CRITERION= .2399 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 798
 *** TIME = .662710E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1346E-04 OSCILLATION LIMIT = 106.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.18 CRITERION= .2439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4307
 HT FLOW CONVERGENCE VALUE= .1070 CRITERION= .2391 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 799
 *** TIME = .670599E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1349E-04 OSCILLATION LIMIT = 106.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.48 CRITERION= .2431
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4305
 HT FLOW CONVERGENCE VALUE= .1067 CRITERION= .2380 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 800
 *** TIME = .678488E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1347E-04 OSCILLATION LIMIT = 106.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.16 CRITERION= .2420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4314
 HT FLOW CONVERGENCE VALUE= .1065 CRITERION= .2372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 801
 *** TIME = .686378E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 106.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.47 CRITERION= .2412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4312
 HT FLOW CONVERGENCE VALUE= .1060 CRITERION= .2361 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 802
 *** TIME = .694267E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1348E-04 OSCILLATION LIMIT = 106.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.14 CRITERION= .2402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4321
 HT FLOW CONVERGENCE VALUE= .1059 CRITERION= .2352 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 803
 *** TIME = .702157E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 106.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.45 CRITERION= .2394
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4319
 HT FLOW CONVERGENCE VALUE= .1055 CRITERION= .2342 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 804

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*** TIME = .710046E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1349E-04    OSCILLATION LIMIT = 106.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.13    CRITERION= .2383
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4328
    HT FLOW CONVERGENCE VALUE= .1051    CRITERION= .2333    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 805
*** TIME = .717935E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1351E-04    OSCILLATION LIMIT = 106.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.43    CRITERION= .2375
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4327
    HT FLOW CONVERGENCE VALUE= .1047    CRITERION= .2323    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 806
*** TIME = .725825E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1349E-04    OSCILLATION LIMIT = 106.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.11    CRITERION= .2364
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4336
    HT FLOW CONVERGENCE VALUE= .1044    CRITERION= .2314    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 807
*** TIME = .733714E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1352E-04    OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.42    CRITERION= .2356
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4335
    HT FLOW CONVERGENCE VALUE= .1037    CRITERION= .2303    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 808
*** TIME = .741604E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1350E-04    OSCILLATION LIMIT = 106.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.10    CRITERION= .2345
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4343
    HT FLOW CONVERGENCE VALUE= .1036    CRITERION= .2295    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 809
*** TIME = .749493E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04    OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.40    CRITERION= .2337
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4342
    HT FLOW CONVERGENCE VALUE= .1031    CRITERION= .2284    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 810
*** TIME = .757382E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1351E-04    OSCILLATION LIMIT = 106.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.08    CRITERION= .2326
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4351
    HT FLOW CONVERGENCE VALUE= .1024    CRITERION= .2276    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 811
*** TIME = .765272E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04    OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.39    CRITERION= .2318
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4350
    HT FLOW CONVERGENCE VALUE= .1021    CRITERION= .2265    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 812
*** TIME = .773161E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1352E-04 OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.06 CRITERION= .2307
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4359
HT FLOW CONVERGENCE VALUE= .1017 CRITERION= .2257 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 813
*** TIME = .781051E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.37 CRITERION= .2299
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4358
HT FLOW CONVERGENCE VALUE= .1011 CRITERION= .2246 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 814
*** TIME = .788940E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04 OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.05 CRITERION= .2288
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4366
HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .2237 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 815
*** TIME = .796829E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1355E-04 OSCILLATION LIMIT = 106.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.35 CRITERION= .2280
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4366
HT FLOW CONVERGENCE VALUE= .1001 CRITERION= .2227 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 816
*** TIME = .804719E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.03 CRITERION= .2270
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4375
HT FLOW CONVERGENCE VALUE= .9987E-01 CRITERION= .2218 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 817
*** TIME = .812608E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.34 CRITERION= .2262
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4374
HT FLOW CONVERGENCE VALUE= .9932E-01 CRITERION= .2208 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 818
*** TIME = .820498E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.02 CRITERION= .2251
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4382
HT FLOW CONVERGENCE VALUE= .9917E-01 CRITERION= .2199 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 819
*** TIME = .828387E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.32 CRITERION= .2243

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4382
 HT FLOW CONVERGENCE VALUE= .9850E-01 CRITERION= .2188 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 820
 *** TIME = .836276E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1355E-04 OSCILLATION LIMIT = 106.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.00 CRITERION= .2232
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4390
 HT FLOW CONVERGENCE VALUE= .9831E-01 CRITERION= .2180 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 821
 *** TIME = .844166E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1357E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.31 CRITERION= .2224
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4390
 HT FLOW CONVERGENCE VALUE= .9788E-01 CRITERION= .2169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 822
 *** TIME = .852055E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.99 CRITERION= .2213
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4399
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .2161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 823
 *** TIME = .859945E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1358E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.29 CRITERION= .2205
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4399
 HT FLOW CONVERGENCE VALUE= .9717E-01 CRITERION= .2150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 824
 *** TIME = .867834E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.97 CRITERION= .2194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407
 HT FLOW CONVERGENCE VALUE= .9672E-01 CRITERION= .2141 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 825
 *** TIME = .875723E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.27 CRITERION= .2186
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407
 HT FLOW CONVERGENCE VALUE= .9651E-01 CRITERION= .2131 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 826
 *** TIME = .883613E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1357E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.95 CRITERION= .2175
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4414
 HT FLOW CONVERGENCE VALUE= .9607E-01 CRITERION= .2122 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 827
 *** TIME = .891502E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.26 CRITERION= .2167
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4415
 HT FLOW CONVERGENCE VALUE= .9589E-01 CRITERION= .2111 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 828
 *** TIME = .899392E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1358E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.94 CRITERION= .2156
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4423
 HT FLOW CONVERGENCE VALUE= .9524E-01 CRITERION= .2103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 829
 *** TIME = .907281E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.24 CRITERION= .2148
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4424
 HT FLOW CONVERGENCE VALUE= .9523E-01 CRITERION= .2092 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 830
 *** TIME = .915170E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.92 CRITERION= .2137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4432
 HT FLOW CONVERGENCE VALUE= .9468E-01 CRITERION= .2084 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 831
 *** TIME = .923060E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1361E-04 OSCILLATION LIMIT = 107.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.23 CRITERION= .2129
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4433
 HT FLOW CONVERGENCE VALUE= .9403E-01 CRITERION= .2073 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 832
 *** TIME = .930949E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.91 CRITERION= .2119
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4440
 HT FLOW CONVERGENCE VALUE= .9339E-01 CRITERION= .2064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 833
 *** TIME = .938839E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1362E-04 OSCILLATION LIMIT = 107.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.21 CRITERION= .2111
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4442
 HT FLOW CONVERGENCE VALUE= .9304E-01 CRITERION= .2054 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 834
 *** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:23:34 JUN 19, 1995 CP= 45640.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 51.27 CRITERION= .2117
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3731
 HT FLOW CONVERGENCE VALUE= .8684E-01 CRITERION= .2047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 835
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9148E-05 OSCILLATION LIMIT = 72.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.58 CRITERION= .2111
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3759
 HT FLOW CONVERGENCE VALUE= .8647E-01 CRITERION= .2039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 836
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9184E-05 OSCILLATION LIMIT = 72.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.25 CRITERION= .2102
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3775
 HT FLOW CONVERGENCE VALUE= .8613E-01 CRITERION= .2033 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 837
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9238E-05 OSCILLATION LIMIT = 72.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.56 CRITERION= .2097
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3764
 HT FLOW CONVERGENCE VALUE= .8603E-01 CRITERION= .2024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 838
 *** TIME = .978286E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9192E-05 OSCILLATION LIMIT = 72.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.23 CRITERION= .2088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3781
 HT FLOW CONVERGENCE VALUE= .8582E-01 CRITERION= .2018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 839
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9245E-05 OSCILLATION LIMIT = 72.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.53 CRITERION= .2082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3771
 HT FLOW CONVERGENCE VALUE= .8531E-01 CRITERION= .2010 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 840
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9202E-05 OSCILLATION LIMIT = 72.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.21 CRITERION= .2074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3787
 HT FLOW CONVERGENCE VALUE= .8516E-01 CRITERION= .2004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 841
 *** TIME = .100195E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9255E-05 OSCILLATION LIMIT = 73.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.51 CRITERION= .2068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3778
 HT FLOW CONVERGENCE VALUE= .8475E-01 CRITERION= .1995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 842
 *** TIME = .100984E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9213E-05 OSCILLATION LIMIT = 72.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.19 CRITERION= .2060
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3793
 HT FLOW CONVERGENCE VALUE= .8460E-01 CRITERION= .1989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 843
 *** TIME = .101773E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9263E-05 OSCILLATION LIMIT = 73.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.49 CRITERION= .2054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3783
 HT FLOW CONVERGENCE VALUE= .8426E-01 CRITERION= .1981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 844
 *** TIME = .102562E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9222E-05 OSCILLATION LIMIT = 72.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.17 CRITERION= .2046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3798
 HT FLOW CONVERGENCE VALUE= .8380E-01 CRITERION= .1975 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 845
 *** TIME = .103351E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9270E-05 OSCILLATION LIMIT = 73.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.47 CRITERION= .2040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3788
 HT FLOW CONVERGENCE VALUE= .8373E-01 CRITERION= .1966 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 846
 *** TIME = .104140E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9230E-05 OSCILLATION LIMIT = 72.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.14 CRITERION= .2031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802
 HT FLOW CONVERGENCE VALUE= .8359E-01 CRITERION= .1960 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 847
 *** TIME = .104929E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9277E-05 OSCILLATION LIMIT = 73.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.45 CRITERION= .2026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3794
 HT FLOW CONVERGENCE VALUE= .8328E-01 CRITERION= .1952 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 848
 *** TIME = .105718E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9238E-05 OSCILLATION LIMIT = 72.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.12 CRITERION= .2017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3808
 HT FLOW CONVERGENCE VALUE= .8295E-01 CRITERION= .1945 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 849
 *** TIME = .106507E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9285E-05 OSCILLATION LIMIT = 73.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.43 CRITERION= .2012
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3799

HT FLOW CONVERGENCE VALUE= .8275E-01 CRITERION= .1937 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 850
 *** TIME = .107296E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9247E-05 OSCILLATION LIMIT = 72.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.10 CRITERION= .2003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3813
 HT FLOW CONVERGENCE VALUE= .8279E-01 CRITERION= .1931 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 851
 *** TIME = .108085E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9293E-05 OSCILLATION LIMIT = 73.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .1998
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3805
 HT FLOW CONVERGENCE VALUE= .8275E-01 CRITERION= .1922 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 852
 *** TIME = .108874E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9257E-05 OSCILLATION LIMIT = 73.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.08 CRITERION= .1989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3818
 HT FLOW CONVERGENCE VALUE= .8276E-01 CRITERION= .1916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 853
 *** TIME = .109663E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9303E-05 OSCILLATION LIMIT = 73.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.38 CRITERION= .1983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3810
 HT FLOW CONVERGENCE VALUE= .8251E-01 CRITERION= .1908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 854
 *** TIME = .110452E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9266E-05 OSCILLATION LIMIT = 73.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.06 CRITERION= .1975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3824
 HT FLOW CONVERGENCE VALUE= .8243E-01 CRITERION= .1902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 855
 *** TIME = .111241E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9310E-05 OSCILLATION LIMIT = 73.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.36 CRITERION= .1969
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3816
 HT FLOW CONVERGENCE VALUE= .8206E-01 CRITERION= .1893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 856
 *** TIME = .112029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9276E-05 OSCILLATION LIMIT = 73.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.04 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3829
 HT FLOW CONVERGENCE VALUE= .8218E-01 CRITERION= .1887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 857
 *** TIME = .112818E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9319E-05 OSCILLATION LIMIT = 73.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.34 CRITERION= .1955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3822
 HT FLOW CONVERGENCE VALUE= .8200E-01 CRITERION= .1879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 858
 *** TIME = .113607E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9285E-05 OSCILLATION LIMIT = 73.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.02 CRITERION= .1947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3834
 HT FLOW CONVERGENCE VALUE= .8183E-01 CRITERION= .1872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 859
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9326E-05 OSCILLATION LIMIT = 73.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .1941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3827
 HT FLOW CONVERGENCE VALUE= .8175E-01 CRITERION= .1864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 860
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9293E-05 OSCILLATION LIMIT = 73.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.99 CRITERION= .1932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3839
 HT FLOW CONVERGENCE VALUE= .8165E-01 CRITERION= .1858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 861
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9332E-05 OSCILLATION LIMIT = 73.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.30 CRITERION= .1927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3832
 HT FLOW CONVERGENCE VALUE= .8148E-01 CRITERION= .1849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 862
 *** TIME = .116763E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9301E-05 OSCILLATION LIMIT = 73.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.97 CRITERION= .1918
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3845
 HT FLOW CONVERGENCE VALUE= .8130E-01 CRITERION= .1843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 863
 *** TIME = .117552E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9342E-05 OSCILLATION LIMIT = 73.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.27 CRITERION= .1913
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3838
 HT FLOW CONVERGENCE VALUE= .8101E-01 CRITERION= .1835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 864
 *** TIME = .118341E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9311E-05 OSCILLATION LIMIT = 73.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.95 CRITERION= .1904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3850
 HT FLOW CONVERGENCE VALUE= .8088E-01 CRITERION= .1829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 865
 *** TIME = .119130E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9350E-05 OSCILLATION LIMIT = 73.77

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.25 CRITERION= .1899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3844
 HT FLOW CONVERGENCE VALUE= .8032E-01 CRITERION= .1820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 866
 *** TIME = .119919E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9319E-05 OSCILLATION LIMIT = 73.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.93 CRITERION= .1890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3856
 HT FLOW CONVERGENCE VALUE= .8019E-01 CRITERION= .1814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 867
 *** TIME = .120708E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9357E-05 OSCILLATION LIMIT = 73.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.23 CRITERION= .1884
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3850
 HT FLOW CONVERGENCE VALUE= .7985E-01 CRITERION= .1806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 868
 *** TIME = .121497E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9328E-05 OSCILLATION LIMIT = 73.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.91 CRITERION= .1876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3861
 HT FLOW CONVERGENCE VALUE= .7955E-01 CRITERION= .1799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 869
 *** TIME = .122286E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9366E-05 OSCILLATION LIMIT = 73.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.21 CRITERION= .1870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3855
 HT FLOW CONVERGENCE VALUE= .7913E-01 CRITERION= .1791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 870
 *** TIME = .123075E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9338E-05 OSCILLATION LIMIT = 73.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.89 CRITERION= .1862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3867
 HT FLOW CONVERGENCE VALUE= .7895E-01 CRITERION= .1785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 871
 *** TIME = .123864E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9375E-05 OSCILLATION LIMIT = 73.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.19 CRITERION= .1856
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3862
 HT FLOW CONVERGENCE VALUE= .7883E-01 CRITERION= .1776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 872
 *** TIME = .124653E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9348E-05 OSCILLATION LIMIT = 73.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.86 CRITERION= .1848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873
 HT FLOW CONVERGENCE VALUE= .7863E-01 CRITERION= .1770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 873

*** TIME = .125441E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9383E-05 OSCILLATION LIMIT = 74.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.17 CRITERION= .1842
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3868
HT FLOW CONVERGENCE VALUE= .7822E-01 CRITERION= .1762 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 40 COMPLETED. CUM ITER = 874
*** TIME = .126230E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9357E-05 OSCILLATION LIMIT = 73.82

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:01:17 JUN 19, 1995 CP= 47845.260
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 43.22 CRITERION= .1814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3149
HT FLOW CONVERGENCE VALUE= .6484E-01 CRITERION= .1757 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 1 COMPLETED. CUM ITER = 875
*** TIME = .127019E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8830E-05 OSCILLATION LIMIT = 69.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.52 CRITERION= .1809
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3191
HT FLOW CONVERGENCE VALUE= .6493E-01 CRITERION= .1750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 2 COMPLETED. CUM ITER = 876
*** TIME = .127808E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8937E-05 OSCILLATION LIMIT = 70.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.20 CRITERION= .1802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3210
HT FLOW CONVERGENCE VALUE= .6473E-01 CRITERION= .1745 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 3 COMPLETED. CUM ITER = 877
*** TIME = .128597E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9019E-05 OSCILLATION LIMIT = 71.16
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.51 CRITERION= .1798
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3192
HT FLOW CONVERGENCE VALUE= .6449E-01 CRITERION= .1738 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 4 COMPLETED. CUM ITER = 878
*** TIME = .129386E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8937E-05 OSCILLATION LIMIT = 70.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.18 CRITERION= .1791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3214
HT FLOW CONVERGENCE VALUE= .6440E-01 CRITERION= .1733 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 5 COMPLETED. CUM ITER = 879
*** TIME = .130175E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9025E-05 OSCILLATION LIMIT = 71.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.49 CRITERION= .1786
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3196
HT FLOW CONVERGENCE VALUE= .6398E-01 CRITERION= .1726 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 880
*** TIME = .130964E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8945E-05 OSCILLATION LIMIT = 70.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.17 CRITERION= .1779
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3217
HT FLOW CONVERGENCE VALUE= .6405E-01 CRITERION= .1721 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 881
*** TIME = .131753E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9030E-05 OSCILLATION LIMIT = 71.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.47 CRITERION= .1775
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3200
HT FLOW CONVERGENCE VALUE= .6370E-01 CRITERION= .1714 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 882
*** TIME = .132542E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8953E-05 OSCILLATION LIMIT = 70.63
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.15 CRITERION= .1767
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3221
HT FLOW CONVERGENCE VALUE= .6346E-01 CRITERION= .1709 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 883
*** TIME = .133331E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9036E-05 OSCILLATION LIMIT = 71.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.46 CRITERION= .1763
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3204
HT FLOW CONVERGENCE VALUE= .6330E-01 CRITERION= .1702 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 884
*** TIME = .134120E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8960E-05 OSCILLATION LIMIT = 70.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.14 CRITERION= .1756
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3224
HT FLOW CONVERGENCE VALUE= .6345E-01 CRITERION= .1697 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 885
*** TIME = .134909E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9041E-05 OSCILLATION LIMIT = 71.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.44 CRITERION= .1751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3209
HT FLOW CONVERGENCE VALUE= .6310E-01 CRITERION= .1690 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 886
*** TIME = .135698E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8969E-05 OSCILLATION LIMIT = 70.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.12 CRITERION= .1744
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3228
HT FLOW CONVERGENCE VALUE= .6287E-01 CRITERION= .1685 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 887
*** TIME = .136487E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9048E-05 OSCILLATION LIMIT = 71.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.43 CRITERION= .1740

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3213
 HT FLOW CONVERGENCE VALUE= .6235E-01 CRITERION= .1678 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 888
 *** TIME = .137276E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8977E-05 OSCILLATION LIMIT = 70.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.11 CRITERION= .1732
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3232
 HT FLOW CONVERGENCE VALUE= .6246E-01 CRITERION= .1673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 889
 *** TIME = .138065E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9054E-05 OSCILLATION LIMIT = 71.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.41 CRITERION= .1728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3217
 HT FLOW CONVERGENCE VALUE= .6211E-01 CRITERION= .1666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 890
 *** TIME = .138853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8984E-05 OSCILLATION LIMIT = 70.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.09 CRITERION= .1721
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3235
 HT FLOW CONVERGENCE VALUE= .6219E-01 CRITERION= .1661 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 891
 *** TIME = .139642E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9060E-05 OSCILLATION LIMIT = 71.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.40 CRITERION= .1716
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3221
 HT FLOW CONVERGENCE VALUE= .6207E-01 CRITERION= .1654 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 892
 *** TIME = .140431E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8993E-05 OSCILLATION LIMIT = 70.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.07 CRITERION= .1709
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3239
 HT FLOW CONVERGENCE VALUE= .6189E-01 CRITERION= .1649 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 893
 *** TIME = .141220E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9066E-05 OSCILLATION LIMIT = 71.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.38 CRITERION= .1705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3225
 HT FLOW CONVERGENCE VALUE= .6185E-01 CRITERION= .1642 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 894
 *** TIME = .142009E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9000E-05 OSCILLATION LIMIT = 71.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.06 CRITERION= .1698
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3243
 HT FLOW CONVERGENCE VALUE= .6251E-01 CRITERION= .1637 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 895
 *** TIME = .142798E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9071E-05 OSCILLATION LIMIT = 71.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.36 CRITERION= .1693
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3230
 HT FLOW CONVERGENCE VALUE= .6264E-01 CRITERION= .1630 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 896
 *** TIME = .143587E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9008E-05 OSCILLATION LIMIT = 71.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.04 CRITERION= .1686
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3247
 HT FLOW CONVERGENCE VALUE= .6248E-01 CRITERION= .1625 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 897
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9078E-05 OSCILLATION LIMIT = 71.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.35 CRITERION= .1682
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3234
 HT FLOW CONVERGENCE VALUE= .6205E-01 CRITERION= .1618 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 898
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9015E-05 OSCILLATION LIMIT = 71.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.03 CRITERION= .1674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3250
 HT FLOW CONVERGENCE VALUE= .6204E-01 CRITERION= .1613 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 899
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9083E-05 OSCILLATION LIMIT = 71.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.33 CRITERION= .1670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3237
 HT FLOW CONVERGENCE VALUE= .6162E-01 CRITERION= .1606 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 900
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9023E-05 OSCILLATION LIMIT = 71.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.01 CRITERION= .1663
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3254
 HT FLOW CONVERGENCE VALUE= .6148E-01 CRITERION= .1601 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 901
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9088E-05 OSCILLATION LIMIT = 71.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.32 CRITERION= .1658
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3241
 HT FLOW CONVERGENCE VALUE= .6097E-01 CRITERION= .1594 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 902
 *** TIME = .148321E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9030E-05 OSCILLATION LIMIT = 71.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.00 CRITERION= .1651
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3257
 HT FLOW CONVERGENCE VALUE= .6084E-01 CRITERION= .1589 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 903
 *** TIME = .149110E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .9095E-05 OSCILLATION LIMIT = 71.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.30 CRITERION= .1647
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3245
 HT FLOW CONVERGENCE VALUE= .6027E-01 CRITERION= .1582 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 904
 *** TIME = .149899E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9038E-05 OSCILLATION LIMIT = 71.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.98 CRITERION= .1639
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3261
 HT FLOW CONVERGENCE VALUE= .6004E-01 CRITERION= .1577 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 905
 *** TIME = .150688E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9102E-05 OSCILLATION LIMIT = 71.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.29 CRITERION= .1635
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3249
 HT FLOW CONVERGENCE VALUE= .5954E-01 CRITERION= .1570 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 906
 *** TIME = .151476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9048E-05 OSCILLATION LIMIT = 71.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.97 CRITERION= .1628
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3265
 HT FLOW CONVERGENCE VALUE= .5833E-01 CRITERION= .1565 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 907
 *** TIME = .152265E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9110E-05 OSCILLATION LIMIT = 71.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.27 CRITERION= .1624
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3254
 HT FLOW CONVERGENCE VALUE= .5765E-01 CRITERION= .1558 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 908
 *** TIME = .153054E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9058E-05 OSCILLATION LIMIT = 71.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.95 CRITERION= .1616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3269
 HT FLOW CONVERGENCE VALUE= .5750E-01 CRITERION= .1553 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 909
 *** TIME = .153843E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9118E-05 OSCILLATION LIMIT = 71.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.26 CRITERION= .1612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3258
 HT FLOW CONVERGENCE VALUE= .5726E-01 CRITERION= .1546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 910
 *** TIME = .154632E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9067E-05 OSCILLATION LIMIT = 71.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.93 CRITERION= .1605
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3272
 HT FLOW CONVERGENCE VALUE= .5717E-01 CRITERION= .1541 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 911
*** TIME = .155421E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9125E-05 OSCILLATION LIMIT = 71.99
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.24 CRITERION= .1600
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3262
HT FLOW CONVERGENCE VALUE= .5688E-01 CRITERION= .1534 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 912
*** TIME = .156210E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9075E-05 OSCILLATION LIMIT = 71.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.92 CRITERION= .1593
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3276
HT FLOW CONVERGENCE VALUE= .5692E-01 CRITERION= .1529 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 913
*** TIME = .156999E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9131E-05 OSCILLATION LIMIT = 72.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.22 CRITERION= .1589
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3266
HT FLOW CONVERGENCE VALUE= .5655E-01 CRITERION= .1522 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 914
*** TIME = .157788E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9083E-05 OSCILLATION LIMIT = 71.66

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:38:57 JUN 19, 1995 CP= 50048.720
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 35.44 CRITERION= .1563
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2553
HT FLOW CONVERGENCE VALUE= .4478E-01 CRITERION= .1519 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 915
*** TIME = .158577E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8404E-05 OSCILLATION LIMIT = 66.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.75 CRITERION= .1560
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2583
HT FLOW CONVERGENCE VALUE= .4479E-01 CRITERION= .1513 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 916
*** TIME = .159366E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8488E-05 OSCILLATION LIMIT = 66.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.43 CRITERION= .1554
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2606
HT FLOW CONVERGENCE VALUE= .4501E-01 CRITERION= .1509 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 917
*** TIME = .160155E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8609E-05 OSCILLATION LIMIT = 67.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.74 CRITERION= .1551
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2584

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HT FLOW CONVERGENCE VALUE= .4467E-01 CRITERION= .1504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 918
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8489E-05 OSCILLATION LIMIT = 66.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.42 CRITERION= .1545
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2609
 HT FLOW CONVERGENCE VALUE= .4476E-01 CRITERION= .1500 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 919
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8613E-05 OSCILLATION LIMIT = 67.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.73 CRITERION= .1542
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2587
 HT FLOW CONVERGENCE VALUE= .4438E-01 CRITERION= .1494 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 920
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8496E-05 OSCILLATION LIMIT = 67.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.41 CRITERION= .1536
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2611
 HT FLOW CONVERGENCE VALUE= .4434E-01 CRITERION= .1491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 921
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8617E-05 OSCILLATION LIMIT = 67.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.72 CRITERION= .1533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2589
 HT FLOW CONVERGENCE VALUE= .4406E-01 CRITERION= .1485 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 922
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8503E-05 OSCILLATION LIMIT = 67.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.40 CRITERION= .1527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2613
 HT FLOW CONVERGENCE VALUE= .4404E-01 CRITERION= .1481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 923
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8621E-05 OSCILLATION LIMIT = 68.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.71 CRITERION= .1523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2592
 HT FLOW CONVERGENCE VALUE= .4376E-01 CRITERION= .1476 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 924
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8511E-05 OSCILLATION LIMIT = 67.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.39 CRITERION= .1517
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2615
 HT FLOW CONVERGENCE VALUE= .4381E-01 CRITERION= .1472 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 925
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = 68.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.70 CRITERION= .1514
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2595
 HT FLOW CONVERGENCE VALUE= .4352E-01 CRITERION= .1466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 926
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8519E-05 OSCILLATION LIMIT = 67.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.38 CRITERION= .1508
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2617
 HT FLOW CONVERGENCE VALUE= .4346E-01 CRITERION= .1463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 927
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8630E-05 OSCILLATION LIMIT = 68.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.69 CRITERION= .1505
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2598
 HT FLOW CONVERGENCE VALUE= .4307E-01 CRITERION= .1457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 928
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8527E-05 OSCILLATION LIMIT = 67.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.37 CRITERION= .1499
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2619
 HT FLOW CONVERGENCE VALUE= .4296E-01 CRITERION= .1453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 929
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8635E-05 OSCILLATION LIMIT = 68.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.68 CRITERION= .1496
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2601
 HT FLOW CONVERGENCE VALUE= .4266E-01 CRITERION= .1448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 930
 *** TIME = .170411E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8535E-05 OSCILLATION LIMIT = 67.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.36 CRITERION= .1490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2622
 HT FLOW CONVERGENCE VALUE= .4263E-01 CRITERION= .1444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 931
 *** TIME = .171200E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8640E-05 OSCILLATION LIMIT = 68.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.67 CRITERION= .1487
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2603
 HT FLOW CONVERGENCE VALUE= .4234E-01 CRITERION= .1438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 932
 *** TIME = .171989E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8543E-05 OSCILLATION LIMIT = 67.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.35 CRITERION= .1481
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2624
 HT FLOW CONVERGENCE VALUE= .4191E-01 CRITERION= .1435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 933
 *** TIME = .172778E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8645E-05 OSCILLATION LIMIT = 68.21

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.65 CRITERION= .1478
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2606
 HT FLOW CONVERGENCE VALUE= .4155E-01 CRITERION= .1429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 934
 *** TIME = .173567E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8551E-05 OSCILLATION LIMIT = 67.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.34 CRITERION= .1472
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2626
 HT FLOW CONVERGENCE VALUE= .4165E-01 CRITERION= .1425 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 935
 *** TIME = .174356E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8651E-05 OSCILLATION LIMIT = 68.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .1469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2609
 HT FLOW CONVERGENCE VALUE= .4079E-01 CRITERION= .1420 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 936
 *** TIME = .175145E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8559E-05 OSCILLATION LIMIT = 67.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.33 CRITERION= .1463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2628
 HT FLOW CONVERGENCE VALUE= .3994E-01 CRITERION= .1416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 937
 *** TIME = .175934E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8656E-05 OSCILLATION LIMIT = 68.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.63 CRITERION= .1460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2612
 HT FLOW CONVERGENCE VALUE= .3964E-01 CRITERION= .1410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 938
 *** TIME = .176723E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8568E-05 OSCILLATION LIMIT = 67.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.31 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2631
 HT FLOW CONVERGENCE VALUE= .3944E-01 CRITERION= .1407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 939
 *** TIME = .177512E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8662E-05 OSCILLATION LIMIT = 68.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.62 CRITERION= .1451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2615
 HT FLOW CONVERGENCE VALUE= .3907E-01 CRITERION= .1401 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 940
 *** TIME = .178300E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8576E-05 OSCILLATION LIMIT = 67.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.30 CRITERION= .1445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2633
 HT FLOW CONVERGENCE VALUE= .3891E-01 CRITERION= .1397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 941

*** TIME = .179089E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8669E-05 OSCILLATION LIMIT = 68.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.61 CRITERION= .1442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2618
 HT FLOW CONVERGENCE VALUE= .3826E-01 CRITERION= .1392 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 942
 *** TIME = .179878E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8585E-05 OSCILLATION LIMIT = 67.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.29 CRITERION= .1436
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2636
 HT FLOW CONVERGENCE VALUE= .3788E-01 CRITERION= .1388 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 943
 *** TIME = .180667E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8674E-05 OSCILLATION LIMIT = 68.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.60 CRITERION= .1433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2621
 HT FLOW CONVERGENCE VALUE= .3706E-01 CRITERION= .1382 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 944
 *** TIME = .181456E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8593E-05 OSCILLATION LIMIT = 67.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.28 CRITERION= .1427
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2638
 HT FLOW CONVERGENCE VALUE= .3704E-01 CRITERION= .1379 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 945
 *** TIME = .182245E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8681E-05 OSCILLATION LIMIT = 68.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.59 CRITERION= .1423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2624
 HT FLOW CONVERGENCE VALUE= .3683E-01 CRITERION= .1373 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 32 COMPLETED. CUM ITER = 946
 *** TIME = .183034E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8601E-05 OSCILLATION LIMIT = 67.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.27 CRITERION= .1417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2640
 HT FLOW CONVERGENCE VALUE= .3680E-01 CRITERION= .1369 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 33 COMPLETED. CUM ITER = 947
 *** TIME = .183823E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8686E-05 OSCILLATION LIMIT = 68.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.58 CRITERION= .1414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2627
 HT FLOW CONVERGENCE VALUE= .3659E-01 CRITERION= .1364 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 34 COMPLETED. CUM ITER = 948
 *** TIME = .184612E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8608E-05 OSCILLATION LIMIT = 67.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.26 CRITERION= .1408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2643
 HT FLOW CONVERGENCE VALUE= .3640E-01 CRITERION= .1360 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 35 COMPLETED. CUM ITER = 949
*** TIME = .185401E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8691E-05 OSCILLATION LIMIT = 68.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.57 CRITERION= .1405
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2629
HT FLOW CONVERGENCE VALUE= .3608E-01 CRITERION= .1354 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 36 COMPLETED. CUM ITER = 950
*** TIME = .186190E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8616E-05 OSCILLATION LIMIT = 67.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.25 CRITERION= .1399
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2645
HT FLOW CONVERGENCE VALUE= .3605E-01 CRITERION= .1351 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 37 COMPLETED. CUM ITER = 951
*** TIME = .186979E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8697E-05 OSCILLATION LIMIT = 68.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.56 CRITERION= .1396
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2632
HT FLOW CONVERGENCE VALUE= .3586E-01 CRITERION= .1345 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 38 COMPLETED. CUM ITER = 952
*** TIME = .187768E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8624E-05 OSCILLATION LIMIT = 68.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.24 CRITERION= .1390
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2648
HT FLOW CONVERGENCE VALUE= .3582E-01 CRITERION= .1341 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 953
*** TIME = .188557E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8702E-05 OSCILLATION LIMIT = 68.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.55 CRITERION= .1387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2635
HT FLOW CONVERGENCE VALUE= .3563E-01 CRITERION= .1335 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 954
*** TIME = .189346E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8632E-05 OSCILLATION LIMIT = 68.10

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***** ANSYS SOLVE COMMAND *****
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:16:34 JUN 19, 1995 CP= 52250.240
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 29.66 CRITERION= .1368
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2137
HT FLOW CONVERGENCE VALUE= .2928E-01 CRITERION= .1333 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 955
*** TIME = .190135E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8184E-05 OSCILLATION LIMIT = 64.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.97 CRITERION= .1366

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2149
 HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .1328 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 956
 *** TIME = .190923E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8206E-05 OSCILLATION LIMIT = 64.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.65 CRITERION= .1361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2171
 HT FLOW CONVERGENCE VALUE= .2929E-01 CRITERION= .1325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 957
 *** TIME = .191712E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8342E-05 OSCILLATION LIMIT = 65.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.96 CRITERION= .1358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2150
 HT FLOW CONVERGENCE VALUE= .2908E-01 CRITERION= .1320 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 958
 *** TIME = .192501E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8209E-05 OSCILLATION LIMIT = 64.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64 CRITERION= .1353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2173
 HT FLOW CONVERGENCE VALUE= .2913E-01 CRITERION= .1318 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 959
 *** TIME = .193290E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8346E-05 OSCILLATION LIMIT = 65.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.95 CRITERION= .1351
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2152
 HT FLOW CONVERGENCE VALUE= .2893E-01 CRITERION= .1313 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 960
 *** TIME = .194079E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8215E-05 OSCILLATION LIMIT = 64.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63 CRITERION= .1346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2174
 HT FLOW CONVERGENCE VALUE= .2898E-01 CRITERION= .1310 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 961
 *** TIME = .194868E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8349E-05 OSCILLATION LIMIT = 65.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.94 CRITERION= .1344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2154
 HT FLOW CONVERGENCE VALUE= .2878E-01 CRITERION= .1305 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 962
 *** TIME = .195657E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8222E-05 OSCILLATION LIMIT = 64.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63 CRITERION= .1339
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2175
 HT FLOW CONVERGENCE VALUE= .2882E-01 CRITERION= .1303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 963
 *** TIME = .196446E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8352E-05 OSCILLATION LIMIT = 65.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.94 CRITERION= .1336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2156
 HT FLOW CONVERGENCE VALUE= .2863E-01 CRITERION= .1298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 964
 *** TIME = .197235E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8229E-05 OSCILLATION LIMIT = 64.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.62 CRITERION= .1331
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2177
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .1295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 965
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8355E-05 OSCILLATION LIMIT = 65.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.93 CRITERION= .1329
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2158
 HT FLOW CONVERGENCE VALUE= .2848E-01 CRITERION= .1290 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 966
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8236E-05 OSCILLATION LIMIT = 64.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1324
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2178
 HT FLOW CONVERGENCE VALUE= .2851E-01 CRITERION= .1288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 967
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8359E-05 OSCILLATION LIMIT = 65.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.92 CRITERION= .1322
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2160
 HT FLOW CONVERGENCE VALUE= .2832E-01 CRITERION= .1283 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 968
 *** TIME = .200391E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8244E-05 OSCILLATION LIMIT = 65.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1316
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2180
 HT FLOW CONVERGENCE VALUE= .2836E-01 CRITERION= .1280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 969
 *** TIME = .201180E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8363E-05 OSCILLATION LIMIT = 65.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.91 CRITERION= .1314
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2162
 HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .1275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 970
 *** TIME = .201969E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8250E-05 OSCILLATION LIMIT = 65.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1309
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2181
 HT FLOW CONVERGENCE VALUE= .2820E-01 CRITERION= .1272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 971
 *** TIME = .202758E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .8366E-05  OSCILLATION LIMIT = 66.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.91  CRITERION= .1307
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2164
  HT FLOW CONVERGENCE VALUE= .2802E-01 CRITERION= .1268  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 972
*** TIME = .203547E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8257E-05  OSCILLATION LIMIT = 65.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.59  CRITERION= .1302
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2183
  HT FLOW CONVERGENCE VALUE= .2803E-01 CRITERION= .1265  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 973
*** TIME = .204335E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8370E-05  OSCILLATION LIMIT = 66.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.90  CRITERION= .1299
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2166
  HT FLOW CONVERGENCE VALUE= .2784E-01 CRITERION= .1260  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 974
*** TIME = .205124E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8264E-05  OSCILLATION LIMIT = 65.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.58  CRITERION= .1294
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2184
  HT FLOW CONVERGENCE VALUE= .2785E-01 CRITERION= .1257  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 975
*** TIME = .205913E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8374E-05  OSCILLATION LIMIT = 66.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.89  CRITERION= .1292
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2168
  HT FLOW CONVERGENCE VALUE= .2768E-01 CRITERION= .1253  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 976
*** TIME = .206702E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8271E-05  OSCILLATION LIMIT = 65.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.57  CRITERION= .1287
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2186
  HT FLOW CONVERGENCE VALUE= .2767E-01 CRITERION= .1250  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 977
*** TIME = .207491E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8378E-05  OSCILLATION LIMIT = 66.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.88  CRITERION= .1285
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2170
  HT FLOW CONVERGENCE VALUE= .2751E-01 CRITERION= .1245  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 978
*** TIME = .208280E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8278E-05  OSCILLATION LIMIT = 65.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.57  CRITERION= .1280
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2187
  HT FLOW CONVERGENCE VALUE= .2751E-01 CRITERION= .1242  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 979
 *** TIME = .209069E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8382E-05 OSCILLATION LIMIT = 66.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.88 CRITERION= .1277
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2172
 HT FLOW CONVERGENCE VALUE= .2734E-01 CRITERION= .1237 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 980
 *** TIME = .209858E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8285E-05 OSCILLATION LIMIT = 65.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.56 CRITERION= .1272
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2189
 HT FLOW CONVERGENCE VALUE= .2733E-01 CRITERION= .1235 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 981
 *** TIME = .210647E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8386E-05 OSCILLATION LIMIT = 66.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.87 CRITERION= .1270
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2174
 HT FLOW CONVERGENCE VALUE= .2718E-01 CRITERION= .1230 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 982
 *** TIME = .211436E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8291E-05 OSCILLATION LIMIT = 65.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2190
 HT FLOW CONVERGENCE VALUE= .2717E-01 CRITERION= .1227 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 983
 *** TIME = .212225E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8389E-05 OSCILLATION LIMIT = 66.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.86 CRITERION= .1263
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2176
 HT FLOW CONVERGENCE VALUE= .2702E-01 CRITERION= .1222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 984
 *** TIME = .213014E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8298E-05 OSCILLATION LIMIT = 65.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1258
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2192
 HT FLOW CONVERGENCE VALUE= .2701E-01 CRITERION= .1220 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 985
 *** TIME = .213803E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8394E-05 OSCILLATION LIMIT = 66.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.85 CRITERION= .1255
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2178
 HT FLOW CONVERGENCE VALUE= .2686E-01 CRITERION= .1215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 986
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8305E-05 OSCILLATION LIMIT = 65.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1250
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2194

HT FLOW CONVERGENCE VALUE= .2685E-01 CRITERION= .1212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 987
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8398E-05 OSCILLATION LIMIT = 66.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.85 CRITERION= .1248
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2180
 HT FLOW CONVERGENCE VALUE= .2670E-01 CRITERION= .1207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 988
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8312E-05 OSCILLATION LIMIT = 65.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .1243
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2195
 HT FLOW CONVERGENCE VALUE= .2667E-01 CRITERION= .1204 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 989
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8402E-05 OSCILLATION LIMIT = 66.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .1241
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2182
 HT FLOW CONVERGENCE VALUE= .2653E-01 CRITERION= .1200 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 990
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8318E-05 OSCILLATION LIMIT = 65.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1235
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2197
 HT FLOW CONVERGENCE VALUE= .2649E-01 CRITERION= .1197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 991
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8406E-05 OSCILLATION LIMIT = 66.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.83 CRITERION= .1233
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2184
 HT FLOW CONVERGENCE VALUE= .2634E-01 CRITERION= .1192 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 992
 *** TIME = .219325E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8324E-05 OSCILLATION LIMIT = 65.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.51 CRITERION= .1228
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2198
 HT FLOW CONVERGENCE VALUE= .2627E-01 CRITERION= .1189 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 993
 *** TIME = .220114E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8410E-05 OSCILLATION LIMIT = 66.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.82 CRITERION= .1226
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2186
 HT FLOW CONVERGENCE VALUE= .2610E-01 CRITERION= .1184 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 994
 *** TIME = .220903E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8331E-05 OSCILLATION LIMIT = 65.73

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:54:10 JUN 19, 1995 CP= 54451.110
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/NTU SNF

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HT FLOW CONVERGENCE VALUE= 29.33      CRITERION= .1220
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1900
HT FLOW CONVERGENCE VALUE= .2388E-01 CRITERION= .1183    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 995
*** TIME = .221692E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6636E-05 OSCILLATION LIMIT = 52.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64      CRITERION= .1219
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1898
HT FLOW CONVERGENCE VALUE= .2375E-01 CRITERION= .1178    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 996
*** TIME = .222481E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6588E-05 OSCILLATION LIMIT = 51.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.33      CRITERION= .1214
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1915
HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .1176    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 997
*** TIME = .223270E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6705E-05 OSCILLATION LIMIT = 52.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64      CRITERION= .1213
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1899
HT FLOW CONVERGENCE VALUE= .2365E-01 CRITERION= .1172    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 998
*** TIME = .224059E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6593E-05 OSCILLATION LIMIT = 52.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.32      CRITERION= .1208
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1916
HT FLOW CONVERGENCE VALUE= .2366E-01 CRITERION= .1170    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 999
*** TIME = .224848E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6708E-05 OSCILLATION LIMIT = 52.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63      CRITERION= .1207
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1901
HT FLOW CONVERGENCE VALUE= .2353E-01 CRITERION= .1166    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 1000
*** TIME = .225637E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6600E-05 OSCILLATION LIMIT = 52.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.31      CRITERION= .1202
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1917
HT FLOW CONVERGENCE VALUE= .2355E-01 CRITERION= .1164    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 1001
*** TIME = .226426E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6711E-05 OSCILLATION LIMIT = 52.95
  
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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.62 CRITERION= .1201
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1902
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .1160 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 1002
 *** TIME = .227215E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6606E-05 OSCILLATION LIMIT = 52.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .1197
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1918
 HT FLOW CONVERGENCE VALUE= .2344E-01 CRITERION= .1158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 1003
 *** TIME = .228004E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6714E-05 OSCILLATION LIMIT = 52.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1195
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1904
 HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1154 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 1004
 *** TIME = .228793E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6612E-05 OSCILLATION LIMIT = 52.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .1191
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1920
 HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1152 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 1005
 *** TIME = .229582E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6718E-05 OSCILLATION LIMIT = 53.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1189
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1906
 HT FLOW CONVERGENCE VALUE= .2321E-01 CRITERION= .1148 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 1006
 *** TIME = .230370E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6619E-05 OSCILLATION LIMIT = 52.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.29 CRITERION= .1185
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1921
 HT FLOW CONVERGENCE VALUE= .2321E-01 CRITERION= .1146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 1007
 *** TIME = .231159E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6721E-05 OSCILLATION LIMIT = 53.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1183
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1907
 HT FLOW CONVERGENCE VALUE= .2309E-01 CRITERION= .1142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 1008
 *** TIME = .231948E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6625E-05 OSCILLATION LIMIT = 52.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.28 CRITERION= .1179
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1922
 HT FLOW CONVERGENCE VALUE= .2307E-01 CRITERION= .1140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 1009

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*** TIME = .232737E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6725E-05    OSCILLATION LIMIT = 53.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.59    CRITERION= .1177
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1909
    HT FLOW CONVERGENCE VALUE= .2296E-01 CRITERION= .1136    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 1010
*** TIME = .233526E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6631E-05    OSCILLATION LIMIT = 52.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.28    CRITERION= .1173
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1924
    HT FLOW CONVERGENCE VALUE= .2295E-01 CRITERION= .1134    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 1011
*** TIME = .234315E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6728E-05    OSCILLATION LIMIT = 53.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.58    CRITERION= .1171
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1911
    HT FLOW CONVERGENCE VALUE= .2285E-01 CRITERION= .1129    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 1012
*** TIME = .235104E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6637E-05    OSCILLATION LIMIT = 52.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.27    CRITERION= .1167
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1925
    HT FLOW CONVERGENCE VALUE= .2284E-01 CRITERION= .1127    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 1013
*** TIME = .235893E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6732E-05    OSCILLATION LIMIT = 53.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.58    CRITERION= .1165
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1913
    HT FLOW CONVERGENCE VALUE= .2274E-01 CRITERION= .1123    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 1014
*** TIME = .236682E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6643E-05    OSCILLATION LIMIT = 52.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.26    CRITERION= .1161
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1926
    HT FLOW CONVERGENCE VALUE= .2273E-01 CRITERION= .1121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 1015
*** TIME = .237471E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6736E-05    OSCILLATION LIMIT = 53.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.57    CRITERION= .1159
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1915
    HT FLOW CONVERGENCE VALUE= .2264E-01 CRITERION= .1117    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 1016
*** TIME = .238260E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6650E-05    OSCILLATION LIMIT = 52.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.25    CRITERION= .1155
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1928
    HT FLOW CONVERGENCE VALUE= .2263E-01 CRITERION= .1115    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 1017
*** TIME = .239049E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6739E-05 OSCILLATION LIMIT = 53.17
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.56 CRITERION= .1153
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1916
HT FLOW CONVERGENCE VALUE= .2254E-01 CRITERION= .1111 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 1018
*** TIME = .239838E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6656E-05 OSCILLATION LIMIT = 52.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.25 CRITERION= .1149
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1929
HT FLOW CONVERGENCE VALUE= .2253E-01 CRITERION= .1109 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 1019
*** TIME = .240627E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6743E-05 OSCILLATION LIMIT = 53.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1147
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1918
HT FLOW CONVERGENCE VALUE= .2244E-01 CRITERION= .1105 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 1020
*** TIME = .241416E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6662E-05 OSCILLATION LIMIT = 52.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.24 CRITERION= .1143
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1931
HT FLOW CONVERGENCE VALUE= .2244E-01 CRITERION= .1103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 1021
*** TIME = .242205E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6747E-05 OSCILLATION LIMIT = 53.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1141
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1920
HT FLOW CONVERGENCE VALUE= .2235E-01 CRITERION= .1099 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 1022
*** TIME = .242994E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6668E-05 OSCILLATION LIMIT = 52.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.23 CRITERION= .1137
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1932
HT FLOW CONVERGENCE VALUE= .2233E-01 CRITERION= .1097 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 1023
*** TIME = .243782E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6751E-05 OSCILLATION LIMIT = 53.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1136
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1922
HT FLOW CONVERGENCE VALUE= .2226E-01 CRITERION= .1093 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 1024
*** TIME = .244571E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6674E-05 OSCILLATION LIMIT = 52.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.22 CRITERION= .1131

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1933
 HT FLOW CONVERGENCE VALUE= .2225E-01 CRITERION= .1091 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 1025
 *** TIME = .245360E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6755E-05 OSCILLATION LIMIT = 53.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .1130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1923
 HT FLOW CONVERGENCE VALUE= .2217E-01 CRITERION= .1087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 1026
 *** TIME = .246149E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6680E-05 OSCILLATION LIMIT = 52.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.22 CRITERION= .1125
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1934
 HT FLOW CONVERGENCE VALUE= .2216E-01 CRITERION= .1085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 1027
 *** TIME = .246938E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6758E-05 OSCILLATION LIMIT = 53.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1925
 HT FLOW CONVERGENCE VALUE= .2209E-01 CRITERION= .1080 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 1028
 *** TIME = .247727E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6686E-05 OSCILLATION LIMIT = 52.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.21 CRITERION= .1119
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1936
 HT FLOW CONVERGENCE VALUE= .2207E-01 CRITERION= .1078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 1029
 *** TIME = .248516E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6762E-05 OSCILLATION LIMIT = 53.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1926
 HT FLOW CONVERGENCE VALUE= .2199E-01 CRITERION= .1074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 1030
 *** TIME = .249305E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6692E-05 OSCILLATION LIMIT = 52.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.20 CRITERION= .1113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1937
 HT FLOW CONVERGENCE VALUE= .2197E-01 CRITERION= .1072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 1031
 *** TIME = .250094E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6766E-05 OSCILLATION LIMIT = 53.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.51 CRITERION= .1112
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1928
 HT FLOW CONVERGENCE VALUE= .2191E-01 CRITERION= .1068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 1032
 *** TIME = .250883E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6698E-05 OSCILLATION LIMIT = 52.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.19 CRITERION= .1107
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1938
 HT FLOW CONVERGENCE VALUE= .2188E-01 CRITERION= .1066 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 1033
 *** TIME = .251672E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6770E-05 OSCILLATION LIMIT = 53.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.50 CRITERION= .1106
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1929
 HT FLOW CONVERGENCE VALUE= .2181E-01 CRITERION= .1062 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 1034
 *** TIME = .252461E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6704E-05 OSCILLATION LIMIT = 52.89

***** ANSYS SOLVE. COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 07:31:46 JUN 19, 1995 CP= 56653.950
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1085
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1475
 HT FLOW CONVERGENCE VALUE= .1660E-01 CRITERION= .1061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 1035
 *** TIME = .253250E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6893E-05 OSCILLATION LIMIT = 54.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.37 CRITERION= .1084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1485
 HT FLOW CONVERGENCE VALUE= .1662E-01 CRITERION= .1057 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 1036
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6924E-05 OSCILLATION LIMIT = 54.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1080
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .1056 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 1037
 *** TIME = .254828E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7076E-05 OSCILLATION LIMIT = 55.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.37 CRITERION= .1079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1485
 HT FLOW CONVERGENCE VALUE= .1657E-01 CRITERION= .1052 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 1038
 *** TIME = .255617E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6925E-05 OSCILLATION LIMIT = 54.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .1051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 1039
 *** TIME = .256406E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .7078E-05  OSCILLATION LIMIT = 55.84
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.37  CRITERION= .1074
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1486
  HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .1048  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 1040
*** TIME = .257194E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6931E-05  OSCILLATION LIMIT = 54.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.05  CRITERION= .1071
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1503
  HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .1046  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 1041
*** TIME = .257983E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7079E-05  OSCILLATION LIMIT = 55.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.36  CRITERION= .1070
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1487
  HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .1043  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 1042
*** TIME = .258772E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6937E-05  OSCILLATION LIMIT = 54.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.05  CRITERION= .1066
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
  HT FLOW CONVERGENCE VALUE= .1648E-01 CRITERION= .1042  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 9 COMPLETED. CUM ITER = 1043
*** TIME = .259561E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7081E-05  OSCILLATION LIMIT = 55.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.36  CRITERION= .1065
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1488
  HT FLOW CONVERGENCE VALUE= .1640E-01 CRITERION= .1038  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 10 COMPLETED. CUM ITER = 1044
*** TIME = .260350E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6942E-05  OSCILLATION LIMIT = 54.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.04  CRITERION= .1061
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
  HT FLOW CONVERGENCE VALUE= .1643E-01 CRITERION= .1037  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 11 COMPLETED. CUM ITER = 1045
*** TIME = .261139E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7083E-05  OSCILLATION LIMIT = 55.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.35  CRITERION= .1060
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1489
  HT FLOW CONVERGENCE VALUE= .1633E-01 CRITERION= .1033  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 12 COMPLETED. CUM ITER = 1046
*** TIME = .261928E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6948E-05  OSCILLATION LIMIT = 54.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.04  CRITERION= .1057
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1505
  HT FLOW CONVERGENCE VALUE= .1636E-01 CRITERION= .1032  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 30 SUBSTEP 13 COMPLETED. CUM ITER = 1047
*** TIME = .262717E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7085E-05 OSCILLATION LIMIT = 55.90
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.35 CRITERION= .1056
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1490
HT FLOW CONVERGENCE VALUE= .1628E-01 CRITERION= .1028 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 14 COMPLETED. CUM ITER = 1048
*** TIME = .263506E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6954E-05 OSCILLATION LIMIT = 54.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1052
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1505
HT FLOW CONVERGENCE VALUE= .1630E-01 CRITERION= .1027 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 15 COMPLETED. CUM ITER = 1049
*** TIME = .264295E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7087E-05 OSCILLATION LIMIT = 55.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1051
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1491
HT FLOW CONVERGENCE VALUE= .1622E-01 CRITERION= .1024 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 16 COMPLETED. CUM ITER = 1050
*** TIME = .265084E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6960E-05 OSCILLATION LIMIT = 54.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1047
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1506
HT FLOW CONVERGENCE VALUE= .1624E-01 CRITERION= .1022 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 17 COMPLETED. CUM ITER = 1051
*** TIME = .265873E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7089E-05 OSCILLATION LIMIT = 55.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1046
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1492
HT FLOW CONVERGENCE VALUE= .1615E-01 CRITERION= .1019 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 18 COMPLETED. CUM ITER = 1052
*** TIME = .266662E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6966E-05 OSCILLATION LIMIT = 54.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1042
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1507
HT FLOW CONVERGENCE VALUE= .1617E-01 CRITERION= .1018 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 19 COMPLETED. CUM ITER = 1053
*** TIME = .267451E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7091E-05 OSCILLATION LIMIT = 55.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1042
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1493
HT FLOW CONVERGENCE VALUE= .1610E-01 CRITERION= .1014 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 20 COMPLETED. CUM ITER = 1054
*** TIME = .268240E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6971E-05 OSCILLATION LIMIT = 55.00
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.02 CRITERION= .1038
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1507

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HT FLOW CONVERGENCE VALUE= .1612E-01 CRITERION= .1013 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 21 COMPLETED. CUM ITER = 1055
 *** TIME = .269029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7094E-05 OSCILLATION LIMIT = 55.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.33 CRITERION= .1037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1494
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .1009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 22 COMPLETED. CUM ITER = 1056
 *** TIME = .269817E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6977E-05 OSCILLATION LIMIT = 55.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.02 CRITERION= .1033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1508
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .1008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 23 COMPLETED. CUM ITER = 1057
 *** TIME = .270606E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7096E-05 OSCILLATION LIMIT = 55.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.33 CRITERION= .1032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1495
 HT FLOW CONVERGENCE VALUE= .1599E-01 CRITERION= .1004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 24 COMPLETED. CUM ITER = 1058
 *** TIME = .271395E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6983E-05 OSCILLATION LIMIT = 55.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.01 CRITERION= .1028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1508
 HT FLOW CONVERGENCE VALUE= .1600E-01 CRITERION= .1003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 25 COMPLETED. CUM ITER = 1059
 *** TIME = .272184E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7098E-05 OSCILLATION LIMIT = 56.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .1027
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1496
 HT FLOW CONVERGENCE VALUE= .1592E-01 CRITERION= .9997E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 26 COMPLETED. CUM ITER = 1060
 *** TIME = .272973E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6988E-05 OSCILLATION LIMIT = 55.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.01 CRITERION= .1024
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1509
 HT FLOW CONVERGENCE VALUE= .1593E-01 CRITERION= .9984E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 27 COMPLETED. CUM ITER = 1061
 *** TIME = .273762E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7101E-05 OSCILLATION LIMIT = 56.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .1023
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1498
 HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .9949E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 28 COMPLETED. CUM ITER = 1062
 *** TIME = .274551E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6994E-05 OSCILLATION LIMIT = 55.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1510
 HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .9936E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 29 COMPLETED. CUM ITER = 1063
 *** TIME = .275340E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7103E-05 OSCILLATION LIMIT = 56.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1499
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .9901E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 30 COMPLETED. CUM ITER = 1064
 *** TIME = .276129E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6999E-05 OSCILLATION LIMIT = 55.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1510
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .9888E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 31 COMPLETED. CUM ITER = 1065
 *** TIME = .276918E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7105E-05 OSCILLATION LIMIT = 56.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1013
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1500
 HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .9853E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 32 COMPLETED. CUM ITER = 1066
 *** TIME = .277707E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7004E-05 OSCILLATION LIMIT = 55.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1010
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1511
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .9840E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 33 COMPLETED. CUM ITER = 1067
 *** TIME = .278496E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7108E-05 OSCILLATION LIMIT = 56.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1501
 HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .9805E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 34 COMPLETED. CUM ITER = 1068
 *** TIME = .279285E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7010E-05 OSCILLATION LIMIT = 55.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.99 CRITERION= .1005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1512
 HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .9792E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 35 COMPLETED. CUM ITER = 1069
 *** TIME = .280074E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7110E-05 OSCILLATION LIMIT = 56.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.30 CRITERION= .1004
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .9757E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 36 COMPLETED. CUM ITER = 1070
 *** TIME = .280863E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7015E-05 OSCILLATION LIMIT = 55.34

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.99 CRITERION= .1000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1512
 HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .9744E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 37 COMPLETED. CUM ITER = 1071
 *** TIME = .281652E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7113E-05 OSCILLATION LIMIT = 56.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.30 CRITERION= .9993E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1503
 HT FLOW CONVERGENCE VALUE= .1554E-01 CRITERION= .9709E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 38 COMPLETED. CUM ITER = 1072
 *** TIME = .282441E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7020E-05 OSCILLATION LIMIT = 55.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.98 CRITERION= .9955E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1513
 HT FLOW CONVERGENCE VALUE= .1553E-01 CRITERION= .9696E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 39 COMPLETED. CUM ITER = 1073
 *** TIME = .283229E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7115E-05 OSCILLATION LIMIT = 56.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.29 CRITERION= .9946E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
 HT FLOW CONVERGENCE VALUE= .1547E-01 CRITERION= .9661E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 40 COMPLETED. CUM ITER = 1074
 *** TIME = .284018E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7025E-05 OSCILLATION LIMIT = 55.42
 Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM FROM .31558E+10 TO .31558E+11 BY .31558E+10
 TIME= .31558E+10

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
 LOAD LABELS = TEMP
 VALUES = 98.414 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10

LOAD LABELS = TEMP
VALUES = 98.761 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 99.587 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 58890.100 TIME= 08:11:02
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 08:11:02 JUN 19, 1995 CP= 58890.100
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 31
TIME AT END OF THE LOAD STEP.31558E+10
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS. USE DEFAULTS
PRINT OUTPUT CONTROLS NO PRINTOUT
DATABASE OUTPUT CONTROLS. ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 18.63 CRITERION= .9839E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1321
HT FLOW CONVERGENCE VALUE= .1336E-01 CRITERION= .9650E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 1 COMPLETED. CUM ITER = 1075
*** TIME = .284807E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7510E-05 OSCILLATION LIMIT = 59.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.94 CRITERION= .9832E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1319
HT FLOW CONVERGENCE VALUE= .1333E-01 CRITERION= .9618E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 2 COMPLETED. CUM ITER = 1076
*** TIME = .285596E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7460E-05 OSCILLATION LIMIT = 58.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9797E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .9607E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 3 COMPLETED. CUM ITER = 1077
 *** TIME = .286385E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7594E-05 OSCILLATION LIMIT = 59.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9790E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1320
 HT FLOW CONVERGENCE VALUE= .1328E-01 CRITERION= .9575E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 4 COMPLETED. CUM ITER = 1078
 *** TIME = .287174E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7463E-05 OSCILLATION LIMIT = 58.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9755E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
 HT FLOW CONVERGENCE VALUE= .1330E-01 CRITERION= .9564E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 1079
 *** TIME = .287963E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7596E-05 OSCILLATION LIMIT = 59.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9747E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1320
 HT FLOW CONVERGENCE VALUE= .1323E-01 CRITERION= .9532E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 1080
 *** TIME = .288752E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7468E-05 OSCILLATION LIMIT = 58.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9713E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
 HT FLOW CONVERGENCE VALUE= .1325E-01 CRITERION= .9521E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 1081
 *** TIME = .289541E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7598E-05 OSCILLATION LIMIT = 59.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9705E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1321
 HT FLOW CONVERGENCE VALUE= .1318E-01 CRITERION= .9489E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 8 COMPLETED. CUM ITER = 1082
 *** TIME = .290330E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7473E-05 OSCILLATION LIMIT = 58.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9670E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
 HT FLOW CONVERGENCE VALUE= .1319E-01 CRITERION= .9478E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 9 COMPLETED. CUM ITER = 1083
 *** TIME = .291119E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7599E-05 OSCILLATION LIMIT = 59.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9663E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1322
 HT FLOW CONVERGENCE VALUE= .1313E-01 CRITERION= .9446E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 10 COMPLETED. CUM ITER = 1084
 *** TIME = .291908E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7478E-05 OSCILLATION LIMIT = 59.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9628E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334

HT FLOW CONVERGENCE VALUE= .1320E-01 CRITERION= .9435E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 11 COMPLETED. CUM ITER = 1085
 *** TIME = .292697E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7601E-05 OSCILLATION LIMIT = 59.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9621E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1323
 HT FLOW CONVERGENCE VALUE= .1320E-01 CRITERION= .9403E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 12 COMPLETED. CUM ITER = 1086
 *** TIME = .293486E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7484E-05 OSCILLATION LIMIT = 59.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9586E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334
 HT FLOW CONVERGENCE VALUE= .1324E-01 CRITERION= .9392E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 13 COMPLETED. CUM ITER = 1087
 *** TIME = .294275E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7602E-05 OSCILLATION LIMIT = 59.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9578E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1324
 HT FLOW CONVERGENCE VALUE= .1332E-01 CRITERION= .9360E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 14 COMPLETED. CUM ITER = 1088
 *** TIME = .295064E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7489E-05 OSCILLATION LIMIT = 59.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9544E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
 HT FLOW CONVERGENCE VALUE= .1340E-01 CRITERION= .9349E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 15 COMPLETED. CUM ITER = 1089
 *** TIME = .295853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7604E-05 OSCILLATION LIMIT = 59.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9536E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1325
 HT FLOW CONVERGENCE VALUE= .1351E-01 CRITERION= .9317E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 16 COMPLETED. CUM ITER = 1090
 *** TIME = .296641E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7496E-05 OSCILLATION LIMIT = 59.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9502E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
 HT FLOW CONVERGENCE VALUE= .1360E-01 CRITERION= .9306E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 17 COMPLETED. CUM ITER = 1091
 *** TIME = .297430E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7606E-05 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9494E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1326
 HT FLOW CONVERGENCE VALUE= .1356E-01 CRITERION= .9274E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 18 COMPLETED. CUM ITER = 1092
 *** TIME = .298219E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7502E-05 OSCILLATION LIMIT = 59.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9460E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1336
 HT FLOW CONVERGENCE VALUE= .1356E-01 CRITERION= .9263E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 19 COMPLETED. CUM ITER = 1093
 *** TIME = .299008E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7609E-05 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9452E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1326
 HT FLOW CONVERGENCE VALUE= .1361E-01 CRITERION= .9231E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 20 COMPLETED. CUM ITER = 1094
 *** TIME = .299797E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7507E-05 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9417E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1336
 HT FLOW CONVERGENCE VALUE= .1367E-01 CRITERION= .9220E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 21 COMPLETED. CUM ITER = 1095
 *** TIME = .300586E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7611E-05 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9410E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1327
 HT FLOW CONVERGENCE VALUE= .1375E-01 CRITERION= .9188E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 22 COMPLETED. CUM ITER = 1096
 *** TIME = .301375E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7513E-05 OSCILLATION LIMIT = 59.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9375E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1337
 HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .9178E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 23 COMPLETED. CUM ITER = 1097
 *** TIME = .302164E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7613E-05 OSCILLATION LIMIT = 60.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9368E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1328
 HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .9145E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 24 COMPLETED. CUM ITER = 1098
 *** TIME = .302953E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7519E-05 OSCILLATION LIMIT = 59.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9333E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1338
 HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .9135E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 25 COMPLETED. CUM ITER = 1099
 *** TIME = .303742E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7616E-05 OSCILLATION LIMIT = 60.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9326E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1329
 HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .9102E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 26 COMPLETED. CUM ITER = 1100
 *** TIME = .304531E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7525E-05 OSCILLATION LIMIT = 59.37

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9291E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1338
 HT FLOW CONVERGENCE VALUE= .1420E-01 CRITERION= .9092E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 27 COMPLETED. CUM ITER = 1101
 *** TIME = .305320E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7619E-05 OSCILLATION LIMIT = 60.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9284E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1330
 HT FLOW CONVERGENCE VALUE= .1416E-01 CRITERION= .9059E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 28 COMPLETED. CUM ITER = 1102
 *** TIME = .306109E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7530E-05 OSCILLATION LIMIT = 59.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9249E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1339
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .9049E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 29 COMPLETED. CUM ITER = 1103
 *** TIME = .306898E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7621E-05 OSCILLATION LIMIT = 60.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9241E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1331
 HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .9016E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 30 COMPLETED. CUM ITER = 1104
 *** TIME = .307687E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7535E-05 OSCILLATION LIMIT = 59.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9207E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1339
 HT FLOW CONVERGENCE VALUE= .1404E-01 CRITERION= .9005E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 31 COMPLETED. CUM ITER = 1105
 *** TIME = .308476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7624E-05 OSCILLATION LIMIT = 60.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9199E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
 HT FLOW CONVERGENCE VALUE= .1398E-01 CRITERION= .8973E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 32 COMPLETED. CUM ITER = 1106
 *** TIME = .309264E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7541E-05 OSCILLATION LIMIT = 59.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9165E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1340
 HT FLOW CONVERGENCE VALUE= .1405E-01 CRITERION= .8962E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 33 COMPLETED. CUM ITER = 1107
 *** TIME = .310053E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7627E-05 OSCILLATION LIMIT = 60.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9157E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
 HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .8930E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 34 COMPLETED. CUM ITER = 1108

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*** TIME = .310842E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7546E-05    OSCILLATION LIMIT = 59.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9122E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1340
    HT FLOW CONVERGENCE VALUE= .1395E-01    CRITERION= .8919E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 35 COMPLETED.    CUM ITER = 1109
*** TIME = .311631E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7629E-05    OSCILLATION LIMIT = 60.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9115E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
    HT FLOW CONVERGENCE VALUE= .1399E-01    CRITERION= .8887E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 36 COMPLETED.    CUM ITER = 1110
*** TIME = .312420E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7551E-05    OSCILLATION LIMIT = 59.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9080E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1341
    HT FLOW CONVERGENCE VALUE= .1398E-01    CRITERION= .8876E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 37 COMPLETED.    CUM ITER = 1111
*** TIME = .313209E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7632E-05    OSCILLATION LIMIT = 60.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9073E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334
    HT FLOW CONVERGENCE VALUE= .1395E-01    CRITERION= .8844E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 38 COMPLETED.    CUM ITER = 1112
*** TIME = .313998E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7556E-05    OSCILLATION LIMIT = 59.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9038E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1342
    HT FLOW CONVERGENCE VALUE= .1425E-01    CRITERION= .8833E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 39 COMPLETED.    CUM ITER = 1113
*** TIME = .314787E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7635E-05    OSCILLATION LIMIT = 60.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9031E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
    HT FLOW CONVERGENCE VALUE= .1439E-01    CRITERION= .8801E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 40 COMPLETED.    CUM ITER = 1114
*** TIME = .315576E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7562E-05    OSCILLATION LIMIT = 59.66

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 08:54:31 JUN 19, 1995 CP= 61135.450
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 100.2 CRITERION= .1334

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6512
 HT FLOW CONVERGENCE VALUE= .7106E-01 CRITERION= .8719E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 1115
 *** TIME = .323465E+10 TIME INC = .788940E+08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 100.5 CRITERION= .1330
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6241
 HT FLOW CONVERGENCE VALUE= .6723E-01 CRITERION= .8615E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 1116
 *** TIME = .331355E+10 TIME INC = .788940E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 300.9 CRITERION= .3130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.943
 HT FLOW CONVERGENCE VALUE= .1875 CRITERION= .8348E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .3797E-02 CRITERION= .8348E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 1118
 *** TIME = .355023E+10 TIME INC = .236682E+09
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 301.2 CRITERION= .3124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.979
 HT FLOW CONVERGENCE VALUE= .1848 CRITERION= .8059E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9204E-01
 HT FLOW CONVERGENCE VALUE= .3577E-02 CRITERION= .8059E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 1120
 *** TIME = .378691E+10 TIME INC = .236682E+09
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 802.7 CRITERION= .8068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.287
 HT FLOW CONVERGENCE VALUE= .4427 CRITERION= .7325E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2233
 HT FLOW CONVERGENCE VALUE= .7744E-02 CRITERION= .7325E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 1122
 *** TIME = .441806E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 803.1 CRITERION= .8063
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.318
 HT FLOW CONVERGENCE VALUE= .3877 CRITERION= .6568E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2048
 HT FLOW CONVERGENCE VALUE= .6415E-02 CRITERION= .6568E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 1124
 *** TIME = .504922E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 802.9 CRITERION= .8057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.350
 HT FLOW CONVERGENCE VALUE= .3349 CRITERION= .5829E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1856
 HT FLOW CONVERGENCE VALUE= .5169E-02 CRITERION= .5829E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 1126
 *** TIME = .568037E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 803.4 CRITERION= .8054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.378
 HT FLOW CONVERGENCE VALUE= .2942 CRITERION= .5067E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1634
 HT FLOW CONVERGENCE VALUE= .3815E-02 CRITERION= .5066E-01 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 1128
*** TIME = .631152E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:08:27 JUN 19, 1995 CP= 61835.610
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 336.0 CRITERION= .3399
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.969
HT FLOW CONVERGENCE VALUE= .1181 CRITERION= .4830E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6042E-01
HT FLOW CONVERGENCE VALUE= .1390E-02 CRITERION= .4830E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 1130
*** TIME = .694267E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.3 CRITERION= .3397
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.969
HT FLOW CONVERGENCE VALUE= .1104 CRITERION= .4572E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5728E-01
HT FLOW CONVERGENCE VALUE= .1208E-02 CRITERION= .4572E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 1132
*** TIME = .757382E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.0 CRITERION= .3392
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.975
HT FLOW CONVERGENCE VALUE= .1044 CRITERION= .4335E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5387E-01
HT FLOW CONVERGENCE VALUE= .1060E-02 CRITERION= .4335E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 1134
*** TIME = .820498E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.4 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.977
HT FLOW CONVERGENCE VALUE= .1005 CRITERION= .4077E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5027E-01
HT FLOW CONVERGENCE VALUE= .9224E-03 CRITERION= .4077E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 1136
*** TIME = .883613E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.1 CRITERION= .3386
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.983
HT FLOW CONVERGENCE VALUE= .9557E-01 CRITERION= .3839E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4649E-01
HT FLOW CONVERGENCE VALUE= .7849E-03 CRITERION= .3839E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 1138
*** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:16:12 JUN 19, 1995 CP= 62254.270
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 193.3 CRITERION= .1970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.122
 HT FLOW CONVERGENCE VALUE= .5313E-01 CRITERION= .3690E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2494E-01
 HT FLOW CONVERGENCE VALUE= .4237E-03 CRITERION= .3690E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 1140
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.0 CRITERION= .1966
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.125
 HT FLOW CONVERGENCE VALUE= .5142E-01 CRITERION= .3561E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2388E-01
 HT FLOW CONVERGENCE VALUE= .3949E-03 CRITERION= .3562E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 1142
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.4 CRITERION= .1965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.124
 HT FLOW CONVERGENCE VALUE= .4940E-01 CRITERION= .3412E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2283E-01
 HT FLOW CONVERGENCE VALUE= .3645E-03 CRITERION= .3412E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 1144
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.1 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.128
 HT FLOW CONVERGENCE VALUE= .4748E-01 CRITERION= .3284E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183E-01
 HT FLOW CONVERGENCE VALUE= .3368E-03 CRITERION= .3284E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 1146
 *** TIME = .119919E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.4 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.127
 HT FLOW CONVERGENCE VALUE= .4549E-01 CRITERION= .3134E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2074E-01
 HT FLOW CONVERGENCE VALUE= .3101E-03 CRITERION= .3134E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 1148
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:23:19 JUN 19, 1995 CP= 62664.040
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7746
 HT FLOW CONVERGENCE VALUE= .3171E-01 CRITERION= .3055E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1410E-01
 HT FLOW CONVERGENCE VALUE= .2128E-03 CRITERION= .3055E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 1150
 *** TIME = .132542E+11 TIME INC = .631152E+09

*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.6 CRITERION= .1457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7725
 HT FLOW CONVERGENCE VALUE= .3077E-01 CRITERION= .2956E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1366E-01
 HT FLOW CONVERGENCE VALUE= .2011E-03 CRITERION= .2956E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 1152
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7756
 HT FLOW CONVERGENCE VALUE= .2990E-01 CRITERION= .2877E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1331E-01
 HT FLOW CONVERGENCE VALUE= .1898E-03 CRITERION= .2877E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 1154
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.6 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7736
 HT FLOW CONVERGENCE VALUE= .2894E-01 CRITERION= .2777E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1290E-01
 HT FLOW CONVERGENCE VALUE= .1784E-03 CRITERION= .2777E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 1156
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7767
 HT FLOW CONVERGENCE VALUE= .2806E-01 CRITERION= .2698E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1255E-01
 HT FLOW CONVERGENCE VALUE= .1677E-03 CRITERION= .2698E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 1158
 *** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:30:53 JUN 19, 1995 CP= 63075.020
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 138.1 CRITERION= .1407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6733
 HT FLOW CONVERGENCE VALUE= .2523E-01 CRITERION= .2618E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 1159
 *** TIME = .164100E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 137.8 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6653
 HT FLOW CONVERGENCE VALUE= .2450E-01 CRITERION= .2559E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 1160
 *** TIME = .170411E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.2 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6635
 HT FLOW CONVERGENCE VALUE= .2381E-01 CRITERION= .2479E-01 <<< CONVERGED

```
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 1161
*** TIME = .176723E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 137.8 CRITERION= .1401
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6667
HT FLOW CONVERGENCE VALUE= .2319E-01 CRITERION= .2420E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 1162
*** TIME = .183034E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.2 CRITERION= .1402
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6648
HT FLOW CONVERGENCE VALUE= .2250E-01 CRITERION= .2340E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 1163
*** TIME = .189346E+11 TIME INC = .631152E+09
```

***** ANSYS SOLVE COMMAND *****

1
***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:35:40 JUN 19, 1995 CP= 63355.420
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

```
HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1190
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5351
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .2298E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 1164
*** TIME = .195657E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
```

```
HT FLOW CONVERGENCE VALUE= 116.9 CRITERION= .1191
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5347
HT FLOW CONVERGENCE VALUE= .1784E-01 CRITERION= .2235E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1165
*** TIME = .201969E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
```

```
HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1188
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5377
HT FLOW CONVERGENCE VALUE= .1746E-01 CRITERION= .2193E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1166
*** TIME = .208280E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
```

```
HT FLOW CONVERGENCE VALUE= 117.0 CRITERION= .1189
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5355
HT FLOW CONVERGENCE VALUE= .1702E-01 CRITERION= .2130E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1167
*** TIME = .214592E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
```

```
HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1186
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5385
HT FLOW CONVERGENCE VALUE= .1665E-01 CRITERION= .2088E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1168
*** TIME = .220903E+11 TIME INC = .631152E+09
```

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:41:03 JUN 19, 1995 CP= 63639.520
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4615
 HT FLOW CONVERGENCE VALUE= .1417E-01 CRITERION= .2033E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1169
 *** TIME = .227215E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.1 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4654
 HT FLOW CONVERGENCE VALUE= .1391E-01 CRITERION= .1999E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1170
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1043
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4631
 HT FLOW CONVERGENCE VALUE= .1357E-01 CRITERION= .1945E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1171
 *** TIME = .239838E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.1 CRITERION= .1040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4660
 HT FLOW CONVERGENCE VALUE= .1330E-01 CRITERION= .1910E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1172
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4637
 HT FLOW CONVERGENCE VALUE= .1296E-01 CRITERION= .1856E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1173
 *** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:46:04 JUN 19, 1995 CP= 63919.180
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 88.90 CRITERION= .9089E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3907
 HT FLOW CONVERGENCE VALUE= .1094E-01 CRITERION= .1830E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1174
 *** TIME = .258772E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 89.22 CRITERION= .9100E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3891
 HT FLOW CONVERGENCE VALUE= .1071E-01 CRITERION= .1785E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1175
 *** TIME = .265084E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.91 CRITERION= .9075E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3919
 HT FLOW CONVERGENCE VALUE= .1053E-01 CRITERION= .1760E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1176
 *** TIME = .271395E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 89.22 CRITERION= .9086E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3895
 HT FLOW CONVERGENCE VALUE= .1029E-01 CRITERION= .1714E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1177
 *** TIME = .277707E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.91 CRITERION= .9062E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3924
 HT FLOW CONVERGENCE VALUE= .1011E-01 CRITERION= .1689E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1178
 *** TIME = .284018E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:51:15 JUN 19, 1995 CP= 64200.730
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 76.37 CRITERION= .7814E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3265
 HT FLOW CONVERGENCE VALUE= .8424E-02 CRITERION= .1649E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1179
 *** TIME = .290330E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.06 CRITERION= .7790E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3300
 HT FLOW CONVERGENCE VALUE= .8307E-02 CRITERION= .1631E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1180
 *** TIME = .296641E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.37 CRITERION= .7802E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3275
 HT FLOW CONVERGENCE VALUE= .8137E-02 CRITERION= .1591E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1181
 *** TIME = .302953E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.06 CRITERION= .7778E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3303
 HT FLOW CONVERGENCE VALUE= .8014E-02 CRITERION= .1573E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1182
 *** TIME = .309264E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.38 CRITERION= .7790E-01

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3278
HT FLOW CONVERGENCE VALUE= .7845E-02 CRITERION= .1533E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1183
*** TIME = .315576E+11 TIME INC = .631152E+09

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 64479.040

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44j.db
FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:56:12 JUN 19, 1995 CP= 64484.630
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
2 NSOL 1136 TEMP peakclad 78.27 .3156E+11 237.7 .6312E+08

*GET TMTMAX FROM VARI 2 ITEM=EXTR.TMAX VALUE= 63115231.6

***** ROUTINE COMPLETED ***** CP = 64484.950

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:56:14 JUN 19, 1995 CP= 64484.980
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****

Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .63115E+08

SET COMMAND GOT LOAD STEP= 14 SUBSTEP= 40 CUMULATIVE ITERATION= 434
TIME/FREQUENCY= .63115E+08

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (2.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at Time of Peak Temp. (2.000001 years)

*** WARNING *** CP= 64511.650 TIME= 09:56:47
The selected element set contains mixed materials.
This could invalidate error estimation.
Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 754
TIME/FREQUENCY= .31558E+09

TITLE=
44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 10 years

*** WARNING *** CP= 64548.420 TIME= 09:57:26
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 914
TIME/FREQUENCY= .15779E+10

TITLE=

44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 64585.230 TIME= 09:58:18
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 40 CUMULATIVE ITERATION= 1114
TIME/FREQUENCY= .31558E+10

TITLE=
44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 64620.930 TIME= 09:58:55
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP = 64629.180

Set some needed variable values:

PARAMETER DATM = .9000000E-01
PARAMETER DAT1 = .2500000
PARAMETER DAT2 = .4100000
PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
Save profile from center to edge

Variable Legend: A01i000

c = center of assembly
h = halfway between center and tube
s = inside structural stainless tube layer
t = stainless tube cladding
g = tube guide
i = inner barrier of DC
o = outer barrier of DC
= ID number of assembly (01 is center)
i = side of assembly toward center of WP
o = side of assembly toward edge of WP
000 = profile center down
045 = profile 45 deg down
090 = profile center side
135 = profile 45 deg up
180 = profile center up

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:59:03 JUN 19, 1995 CP= 64629.190
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2	IS AT NODE 3544	ITEM= TEMP COMP=	NAME= ts1i000
VARIABLE 3	IS AT NODE 1094	ITEM= TEMP COMP=	NAME= t01i000
VARIABLE 4	IS AT NODE 1101	ITEM= TEMP COMP=	NAME= s01i000
VARIABLE 5	IS AT NODE 1138	ITEM= TEMP COMP=	NAME= h01i000
VARIABLE 6	IS AT NODE 1136	ITEM= TEMP COMP=	NAME= c01i000
VARIABLE 7	IS AT NODE 1134	ITEM= TEMP COMP=	NAME= h01o000
VARIABLE 8	IS AT NODE 1055	ITEM= TEMP COMP=	NAME= s01o000
VARIABLE 9	IS AT NODE 1047	ITEM= TEMP COMP=	NAME= t01o000
VARIABLE 10	IS AT NODE 1246	ITEM= TEMP COMP=	NAME= s09i000
VARIABLE 11	IS AT NODE 1283	ITEM= TEMP COMP=	NAME= h09i000
VARIABLE 12	IS AT NODE 1281	ITEM= TEMP COMP=	NAME= c09i000
VARIABLE 13	IS AT NODE 1279	ITEM= TEMP COMP=	NAME= h09o000
VARIABLE 14	IS AT NODE 1200	ITEM= TEMP COMP=	NAME= s09o000
VARIABLE 15	IS AT NODE 1192	ITEM= TEMP COMP=	NAME= t09o000
VARIABLE 16	IS AT NODE 1391	ITEM= TEMP COMP=	NAME= s15i000
VARIABLE 17	IS AT NODE 1428	ITEM= TEMP COMP=	NAME= h15i000

VARIABLE 18 IS AT NODE 1426 ITEM= TEMP COMP= NAME= c15i000
 VARIABLE 19 IS AT NODE 1424 ITEM= TEMP COMP= NAME= h15o000
 VARIABLE 20 IS AT NODE 1345 ITEM= TEMP COMP= NAME= s15o000
 VARIABLE 21 IS AT NODE 1337 ITEM= TEMP COMP= NAME= t15o000
 VARIABLE 22 IS AT NODE 1536 ITEM= TEMP COMP= NAME= s21i000
 VARIABLE 23 IS AT NODE 1573 ITEM= TEMP COMP= NAME= h21i000
 VARIABLE 24 IS AT NODE 1571 ITEM= TEMP COMP= NAME= c21i000
 VARIABLE 25 IS AT NODE 1569 ITEM= TEMP COMP= NAME= h21o000
 VARIABLE 26 IS AT NODE 1490 ITEM= TEMP COMP= NAME= s21o000
 VARIABLE 27 IS AT NODE 1482 ITEM= TEMP COMP= NAME= t21o000
 VARIABLE 28 IS AT NODE 4217 ITEM= TEMP COMP= NAME= i21i000
 VARIABLE 29 IS AT NODE 4207 ITEM= TEMP COMP= NAME= i21o000
 VARIABLE 30 IS AT NODE 4437 ITEM= TEMP COMP= NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts1i000	76.86	.3156E+11	215.8	.9467E+08
3	NSOL	1094 TEMP	t01i000	76.86	.3156E+11	215.9	.9467E+08
4	NSOL	1101 TEMP	s01i000	76.87	.3156E+11	215.9	.9467E+08
5	NSOL	1138 TEMP	h01i000	77.79	.3156E+11	230.2	.6312E+08
6	NSOL	1136 TEMP	c01i000	78.27	.3156E+11	237.7	.6312E+08
7	NSOL	1134 TEMP	h01o000	78.42	.3156E+11	240.3	.6312E+08
8	NSOL	1055 TEMP	s01o000	78.23	.3156E+11	238.0	.6312E+08
9	NSOL	1047 TEMP	t01o000	78.23	.3156E+11	238.0	.6312E+08
10	NSOL	1246 TEMP	s09i000	78.23	.3156E+11	238.0	.6312E+08
11	NSOL	1283 TEMP	h09i000	78.60	.3156E+11	242.3	.6312E+08
12	NSOL	1281 TEMP	c09i000	78.65	.3156E+11	242.1	.6312E+08
13	NSOL	1279 TEMP	h09o000	78.42	.3156E+11	237.9	.6312E+08
14	NSOL	1200 TEMP	s09o000	77.86	.3156E+11	229.1	.6312E+08
15	NSOL	1192 TEMP	t09o000	77.86	.3156E+11	229.0	.6312E+08
16	NSOL	1391 TEMP	s15i000	77.86	.3156E+11	229.0	.6312E+08
17	NSOL	1428 TEMP	h15i000	77.91	.3156E+11	227.6	.6312E+08
18	NSOL	1426 TEMP	c15i000	77.64	.3156E+11	221.5	.6312E+08
19	NSOL	1424 TEMP	h15o000	77.09	.3156E+11	211.5	.9467E+08
20	NSOL	1345 TEMP	s15o000	76.23	.3156E+11	196.7	.9467E+08
21	NSOL	1337 TEMP	t15o000	76.23	.3156E+11	196.7	.9467E+08
22	NSOL	1536 TEMP	s21i000	76.23	.3156E+11	196.6	.9467E+08
23	NSOL	1573 TEMP	h21i000	76.15	.3156E+11	193.4	.9467E+08
24	NSOL	1571 TEMP	c21i000	75.78	.3156E+11	186.1	.1262E+09
25	NSOL	1569 TEMP	h21o000	75.14	.3156E+11	174.4	.1578E+09
26	NSOL	1490 TEMP	o21o000	66.48	.1000E-05	155.9	.2209E+09
27	NSOL	1482 TEMP	t21o000	66.37	.1000E-05	155.8	.2209E+09
28	NSOL	4217 TEMP	i21i000	29.31	.1000E-05	135.2	.2525E+09
29	NSOL	4207 TEMP	i21o000	28.35	.1000E-05	134.3	.2525E+09
30	NSOL	4437 TEMP	o21o000	26.14	.1000E-05	132.7	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.060
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.061	139.072	139.178	158.715	168.730	172.061
.20000E-05	176.685	176.696	176.798	194.202	203.233	206.284
31.558	176.685	176.696	176.798	194.202	203.232	206.284
.31558E+07	199.846	199.856	199.956	216.120	224.542	227.448
.63116E+07	204.249	204.260	204.358	220.267	228.571	231.437
.94673E+07	206.730	206.741	206.838	222.561	230.773	233.608
.12623E+08	208.466	208.477	208.574	224.147	232.284	235.095
.15779E+08	209.781	209.792	209.889	225.334	233.409	236.199
.18935E+08	210.808	210.819	210.915	226.249	234.268	237.039
.22090E+08	211.645	211.656	211.751	226.984	234.953	237.706
.25246E+08	212.336	212.347	212.442	227.582	235.504	238.242
.28402E+08	212.911	212.922	213.016	228.071	235.950	238.672
.31558E+08	213.396	213.407	213.501	228.475	236.313	239.021
.63115E+08	215.692	215.702	215.793	230.154	237.680	240.279
.94673E+08	215.850	215.859	215.947	229.857	237.153	239.669
.12623E+09	215.214	215.224	215.309	228.855	235.962	238.411
.15779E+09	214.316	214.325	214.408	227.653	234.605	236.998
.18935E+09	212.951	212.960	213.041	225.992	232.791	235.129
.22090E+09	211.620	211.629	211.708	224.408	231.076	233.368
.25246E+09	210.344	210.353	210.431	222.896	229.443	231.691
.28402E+09	208.487	208.495	208.571	220.838	227.280	229.490
.31558E+09	206.897	206.906	206.980	219.082	225.437	227.615
.63115E+09	190.741	190.748	190.810	201.300	206.817	208.691
.94673E+09	176.621	176.627	176.681	185.881	190.730	192.370
.12623E+10	164.064	164.069	164.115	172.299	176.610	178.056
.15779E+10	153.549	153.553	153.593	160.889	164.729	166.004
.18935E+10	145.094	145.097	145.133	151.696	155.151	156.288
.22090E+10	138.098	138.101	138.132	144.069	147.198	148.225
.25246E+10	131.844	131.847	131.876	137.293	140.149	141.084
.28402E+10	127.008	127.011	127.037	132.035	134.670	135.530
.31558E+10	122.764	122.766	122.790	127.401	129.832	130.624
.63115E+10	102.214	102.216	102.230	105.056	106.548	107.027
.94673E+10	94.4411	94.4421	94.4527	96.6377	97.7917	98.1600
.12623E+11	90.0070	90.0079	90.0165	91.8277	92.7843	93.0886
.15779E+11	86.9095	86.9103	86.9177	88.4838	89.3109	89.5731
.18935E+11	84.1397	84.1404	84.1468	85.5188	86.2432	86.4724
.22090E+11	81.8823	81.8829	81.8887	83.1148	83.7621	83.9662
.25246E+11	79.9255	79.9260	79.9312	81.0326	81.6138	81.7968
.28402E+11	78.2640	78.2645	78.2691	79.2702	79.7984	79.9643
.31558E+11	76.8617	76.8622	76.8664	77.7851	78.2698	78.4219

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.070
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	168.702	168.701	168.718	175.450	175.913	170.949
.20000E-05	203.391	203.389	203.404	209.010	209.078	204.311
31.558	203.392	203.390	203.405	209.010	209.077	204.311
.31558E+07	224.896	224.894	224.909	229.905	229.825	225.296
.63116E+07	228.926	228.924	228.938	233.823	233.710	229.208
.94673E+07	231.126	231.123	231.137	235.945	235.811	231.335
.12623E+08	232.635	232.633	232.646	237.394	237.245	232.793
.15779E+08	233.757	233.755	233.769	238.467	238.307	233.877
.18935E+08	234.613	234.611	234.624	239.281	239.112	234.702

.22090E+08	235.296	235.294	235.307	239.927	239.750	235.360
.25246E+08	235.845	235.843	235.856	240.442	240.260	235.888
.28402E+08	236.288	236.286	236.299	240.854	240.667	236.313
.31558E+08	236.649	236.647	236.660	241.187	240.996	236.659
.63115E+08	237.994	237.992	238.005	242.332	242.125	237.932
.94673E+08	237.447	237.445	237.457	241.651	241.445	237.371
.12623E+09	236.239	236.237	236.249	240.341	240.142	236.171
.15779E+09	234.866	234.864	234.876	238.887	238.697	234.815
.18935E+09	233.038	233.035	233.047	236.982	236.804	233.011
.22090E+09	231.311	231.309	231.320	235.191	235.024	231.309
.25246E+09	229.666	229.664	229.675	233.487	233.330	229.688
.28402E+09	227.491	227.489	227.499	231.266	231.122	227.546
.31558E+09	225.636	225.634	225.645	229.374	229.242	225.720
.63115E+09	206.921	206.920	206.929	210.287	210.254	207.255
.94673E+09	190.779	190.778	190.786	193.829	193.863	191.270
.12623E+10	176.604	176.603	176.610	179.395	179.476	177.202
.15779E+10	164.675	164.674	164.680	167.228	167.342	165.339
.18935E+10	155.065	155.064	155.070	157.409	157.540	155.755
.22090E+10	147.103	147.102	147.107	149.256	149.394	147.789
.25246E+10	140.049	140.048	140.053	142.037	142.179	140.725
.28402E+10	134.568	134.567	134.572	136.420	136.562	135.228
.31558E+10	129.730	129.729	129.733	131.453	131.594	130.369
.63115E+10	106.457	106.456	106.459	107.559	107.675	106.941
.94673E+10	97.7123	97.7120	97.7139	98.5776	98.6748	98.1113
.12623E+11	92.7143	92.7141	92.7157	93.4375	93.5215	93.0562
.15779E+11	89.2470	89.2468	89.2481	89.8761	89.9510	89.5495
.18935E+11	86.1853	86.1851	86.1863	86.7386	86.8055	86.4544
.22090E+11	83.7080	83.7079	83.7089	84.2048	84.2658	83.9525
.25246E+11	81.5638	81.5637	81.5646	82.0117	82.0674	81.7865
.28402E+11	79.7517	79.7516	79.7525	80.1602	80.2118	79.9568
.31558E+11	78.2263	78.2262	78.2269	78.6021	78.6500	78.4165

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.090
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09e000	1192 TEMP t09e000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15e000
.10000E-05	159.460	159.424	159.407	159.336	152.840	140.500
.20000E-05	193.792	193.755	193.736	192.832	186.263	174.533
.31.558	193.792	193.755	193.736	192.832	186.263	174.533
.31558E+07	215.496	215.459	215.440	214.184	207.732	196.529
.63116E+07	219.521	219.484	219.464	218.147	211.716	200.610
.94673E+07	221.737	221.700	221.680	220.329	213.924	202.902
.12623E+08	223.268	223.231	223.211	221.837	215.457	204.507
.15779E+08	224.415	224.378	224.358	222.967	216.611	205.725
.18935E+08	225.296	225.260	225.240	223.837	217.505	206.677
.22090E+08	226.006	225.970	225.950	224.538	218.230	207.457
.25246E+08	226.582	226.546	226.526	225.108	218.823	208.102
.28402E+08	227.053	227.017	226.997	225.575	219.313	208.641
.31558E+08	227.442	227.406	227.386	225.960	219.721	209.096
.63115E+08	229.055	229.021	229.002	227.581	221.541	211.304
.94673E+08	228.757	228.724	228.705	227.316	221.450	211.522
.12623E+09	227.776	227.743	227.725	226.376	220.664	210.998
.15779E+09	226.603	226.571	226.553	225.242	219.663	210.220
.18935E+09	224.982	224.951	224.934	223.669	218.227	209.009
.22090E+09	223.436	223.406	223.389	222.166	216.843	207.818
.25246E+09	221.962	221.932	221.916	220.731	215.520	206.675
.28402E+09	219.946	219.917	219.901	218.760	213.652	204.970
.31558E+09	218.227	218.198	218.183	217.078	212.057	203.510
.63115E+09	200.784	200.761	200.749	199.970	195.772	188.530
.94673E+09	185.615	185.596	185.586	185.044	181.487	175.257

.12623E+10	172.183	172.166	172.158	171.803	168.744	163.302
.15779E+10	160.870	160.856	160.849	160.631	157.984	153.204
.18935E+10	151.736	151.723	151.717	151.587	149.257	145.005
.22090E+10	144.159	144.147	144.142	144.068	141.997	138.186
.25246E+10	137.416	137.406	137.402	137.370	135.510	132.060
.28402E+10	132.178	132.169	132.165	132.162	130.469	127.306
.31558E+10	127.558	127.550	127.547	127.566	126.022	123.122
.63115E+10	105.223	105.218	105.216	105.296	104.405	102.676
.94673E+10	96.7826	96.7791	96.7777	96.8568	96.1808	94.8563
.12623E+11	91.9545	91.9516	91.9505	92.0247	91.4708	90.3785
.15779E+11	88.5965	88.5940	88.5931	88.6626	88.1877	87.2465
.18935E+11	85.6193	85.6172	85.6164	85.6807	85.2672	84.4446
.22090E+11	83.2059	83.2040	83.2033	83.2639	82.8968	82.1635
.25246E+11	81.1158	81.1141	81.1134	81.1705	80.8425	80.1854
.28402E+11	79.3472	79.3456	79.3451	79.3989	79.1024	78.5064
.31558E+11	77.8570	77.8556	77.8551	77.9061	77.6352	77.0893

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.100
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
.10000E-05	120.866	120.805	120.770	118.134	108.943	93.0563
.20000E-05	156.440	156.380	156.342	153.191	144.328	129.512
31.558	156.440	156.380	156.343	153.191	144.328	129.512
.31558E+07	179.581	179.521	179.483	176.125	167.649	153.703
.63116E+07	183.853	183.793	183.755	180.364	171.951	158.163
.94673E+07	186.298	186.237	186.200	182.795	174.437	160.776
.12623E+08	188.030	187.970	187.932	184.522	176.213	162.658
.15779E+08	189.362	189.302	189.264	185.852	177.590	164.128
.18935E+08	190.417	190.357	190.319	186.909	178.689	165.311
.22090E+08	191.291	191.231	191.194	187.788	179.607	166.308
.25246E+08	192.024	191.965	191.928	188.526	180.384	167.158
.28402E+08	192.647	192.588	192.551	189.156	181.050	167.894
.31558E+08	193.182	193.123	193.086	189.698	181.628	168.538
.63115E+08	196.019	195.962	195.926	192.622	184.850	172.289
.94673E+08	196.725	196.670	196.635	193.422	185.894	173.748
.12623E+09	196.605	196.552	196.518	193.392	186.075	174.278
.15779E+09	196.167	196.115	196.082	193.034	185.896	174.392
.18935E+09	195.293	195.243	195.211	192.247	185.292	174.082
.22090E+09	194.393	194.343	194.312	191.423	184.625	173.666
.25246E+09	193.521	193.473	193.442	190.623	183.971	173.247
.28402E+09	192.053	192.006	191.976	189.226	182.707	172.191
.31558E+09	190.793	190.746	190.717	188.026	181.619	171.277
.63115E+09	177.727	177.689	177.665	175.519	170.164	161.461
.94673E+09	165.908	165.876	165.856	164.126	159.568	152.100
.12623E+10	155.079	155.052	155.036	153.613	149.658	143.137
.15779E+10	145.943	145.920	145.906	144.716	141.266	135.553
.18935E+10	138.534	138.513	138.501	137.486	134.437	129.367
.22090E+10	132.368	132.350	132.339	131.462	128.741	124.201
.25246E+10	126.778	126.762	126.753	125.986	123.534	119.427
.28402E+10	122.453	122.438	122.430	121.748	119.508	115.747
.31558E+10	118.662	118.648	118.641	118.033	115.986	112.539
.63115E+10	99.9893	99.9816	99.9772	99.6672	98.4677	96.4214
.94673E+10	92.7927	92.7869	92.7837	92.5599	91.6479	90.0852
.12623E+11	88.6731	88.6683	88.6657	88.4886	87.7398	86.4528
.15779E+11	85.7744	85.7704	85.7681	85.6201	84.9768	83.8685
.18935E+11	83.1566	83.1530	83.1511	83.0245	82.4632	81.4948
.22090E+11	81.0137	81.0106	81.0089	80.8988	80.3997	79.5369
.25246E+11	79.1538	79.1510	79.1494	79.0530	78.6066	77.8335
.28402E+11	77.5698	77.5672	77.5658	77.4802	77.0761	76.3752

1 .31558E+11 76.2305 76.2282 76.2269 76.1499 75.7802 75.1383

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.110
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21i000	i21o000	o21o000
.10000E-05	66.4820	66.3736	29.3067	28.3486	26.1409
.20000E-05	104.971	104.856	72.3365	71.2830	69.0546
31.558	104.971	104.856	72.3364	71.2830	69.0546
.31558E+07	130.721	130.605	101.537	100.452	98.3033
.63116E+07	135.467	135.351	106.908	105.823	103.696
.94673E+07	138.311	138.196	110.200	109.118	107.010
.12623E+08	140.386	140.271	112.633	111.554	109.463
.15779E+08	142.024	141.909	114.576	113.500	111.424
.18935E+08	143.360	143.246	116.179	115.107	113.045
.22090E+08	144.498	144.384	117.558	116.489	114.440
.25246E+08	145.480	145.366	118.761	117.696	115.659
.28402E+08	146.341	146.227	119.826	118.765	116.739
.31558E+08	147.104	146.991	120.780	119.723	117.709
.63115E+08	151.788	151.679	126.895	125.875	123.949
.94673E+08	153.969	153.863	130.105	129.118	127.261
.12623E+09	155.094	154.990	132.046	131.087	129.289
.15779E+09	155.706	155.605	133.322	132.388	130.639
.18935E+09	155.889	155.791	134.146	133.237	131.537
.22090E+09	155.895	155.799	134.692	133.804	132.147
.25246E+09	155.867	155.774	135.164	134.297	132.679
.28402E+09	155.154	155.063	134.862	134.015	132.431
.31558E+09	154.525	154.436	134.577	133.746	132.190
.63115E+09	147.394	147.321	130.631	129.949	128.662
.94673E+09	140.060	139.999	125.657	125.086	123.999
.12623E+10	132.655	132.602	120.030	119.543	118.606
.15779E+10	126.375	126.330	115.268	114.850	114.038
.18935E+10	121.228	121.189	111.345	110.980	110.265
.22090E+10	116.917	116.882	108.048	107.727	107.091
.25246E+10	112.840	112.809	104.798	104.511	103.940
.28402E+10	109.714	109.686	102.335	102.076	101.555
.31558E+10	107.012	106.987	100.242	100.007	99.5322
.63115E+10	93.1482	93.1336	89.1074	88.9755	88.7065
.94673E+10	87.5871	87.5762	84.4923	84.3942	84.1922
.12623E+11	84.3955	84.3866	81.8422	81.7624	81.5979
.15779E+11	82.0971	82.0895	79.8954	79.8276	79.6867
.18935E+11	79.9472	79.9406	78.0200	77.9611	77.8388
.22090E+11	78.1578	78.1520	76.4385	76.3866	76.2779
.25246E+11	76.5978	76.5927	75.0559	75.0095	74.9129
.28402E+11	75.2548	75.2501	73.8553	73.8137	73.7263
.31558E+11	74.1120	74.1077	72.8293	72.7912	72.7117

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 64633.260 TIME= 09:59:07
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045

VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045

Jun 18 11:47 1995 File Name: ucf44x.old.out BBAA00000-01717-0200-00001 REV 00 ATTACHMENT XII - Page 1

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*****
|                                     |
|   W E L C O M E   T O   T H E   A N S Y S   P R O G R A M   |
|                                     |
|*****|

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***** ANSYS COMMAND LINE ARGUMENTS *****
JOB NAME           = ucf44x
MEMORY REQUESTED (MB) = 64.0
BATCH MODE REQUESTED
start.ans FILE

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***** ANSYS DYNAMIC MEMORY ALLOCATION *****
WORK SPACE REQUESTED      = 16777216      64.000 MB  COMMAND LINE
MINIMUM WORK SPACE REQUIRED = 4718592      18.000 MB
MINIMUM WORK SPACE RECOMMENDED = 6702496   25.568 MB
WORK SPACE OBTAINED       = 16777214      64.000 MB
BYTES PER WORD            = 4

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ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
ENTER /MENU,ON    TO START THE ANSYS MENU SYSTEM
ENTER HELP       FOR GENERAL ANSYS HELP INFORMATION
1 /COM, *****
2 /COM, ANSYS REVISION 5.0A 6/16/1995
3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
4 /COM, *****
5 /COM, *
6 /COM, * File name: ucf44x.inp *
7 /COM, * 44 BWR UCF with High T.L. Disposal Container *
8 /COM, * Helium Fill Gas *
9 /COM, *
10 /COM, * Material Property file: props01.dat *
11 /COM, *
12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes) *
13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
14 /COM, *
15 /COM, * SNF Heat Loads file: bwr1049.dat *
16 /COM, * SNF Type: 10 years old, 49000 MWd/MTU *
17 /COM, *
18 /COM, * Surface Temp. file: c21x5a.parm *

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19 /COM, *      100 MTU/acre (24.7 kgU/m^2) AML (High Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 22.5 m *
22 /COM, *      WP c/c spacing = 16.164 m *
23 /COM, *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,parm,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21x5a,parm,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 DCRAD=1.6260/2.0
68 OWALL=0.1000
69 IWALL=0.0200
70 DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 GCORL=320.0/1000.0
73 GCORS=181.6/1000.0
74 GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 HCELL=153.0/1000.0/2.0
79 SWALL=3.5/1000.0
80 TWALL=20.0/1000.0
81 THWLL=TWALL/2.0
82 /COM,
83 ACTVL=150.0*2.54/100.0
84 PEAKF=1.40
85 /COM, Define calculated parameters,
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLL = assy_volume=cell_width^2*active_length

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89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.                (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.          (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLU=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,          ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,          MI45=MIRAD/SQRT(2.0)
123 /COM,          MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCIRD-OWALL)/SQRT(2.0)
126 DO45=DCIRD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,          *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01,dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049,dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLUME),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTEMP
181 MPTEMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTEMP
188 MPTEMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTEMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Construct geometry for Disposal Container
204 /COM,
205 /COM, Define center and axis keypoints for waste package
206 /COM, Also, create placeholder keypoints and lines
207 /COM, (K's 1,2,3,4,5,6,7,8)
208 /COM, (L's 1,2,3,4)
209 K,1,0.0,0.0,0.0,
210 K,2,0.0,0.0,1.0,
211 K,3,0.0,0.0,1.3,
212 K,4,0.0,0.0,1.4,
213 K,5,0.0,0.0,1.5,
214 K,6,0.0,0.0,1.6,
215 K,7,0.0,0.0,1.7,
216 K,8,0.0,0.0,1.8,
217 L,3,4,
218 L,4,5,
219 L,5,6,
220 L,6,7,
221 /COM, Define disposal container outer radius and material interface
222 /COM, (K's 9,10,11,12,13,14)
223 /COM, (L's 5,6,7,8,9,10,11)
224 /COM, (A's 1,2)
225 K, 9, 0.0, (0.0-DCRAD),0.0,
226 K,10, DCRAD, 0.0,0.0,
227 K,11, 0.0, DCRAD,0.0,
228 K,12, 0.0, (OWALL-DCRAD),0.0,

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229 K,13,      (DCRAD-OWALL),      0.0,0.0,
230 K,14,      0.0,      (DCRAD-OWALL),0.0,
231 L,10,13,
232 LARC,10, 9,1,      DCRAD,
233 LARC,11,10,1,      DCRAD,
234 LARC,13,12,1,      (DCRAD-OWALL),
235 LARC,14,13,1,      (DCRAD-OWALL),
236 L,11,14,
237 L, 9,12,
238 AL, 5, 6,11, 8,
239 AL,10, 7, 5, 9,
240 /COM, *****
241 /COM,      Define UCF shell inner edge and area
242 /COM,      (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
243 /COM,      ( 31,32,33,34,35)
244 /COM,      (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
245 /COM,      ( 28,29,30,31,32,33,34)
246 /COM,      (A's 3,4)
247 K,15, 0.0,      DCIRD,0.0,
248 K,16, GX22,      GY22,0.0,
249 K,17, GX23,      GY23,0.0,
250 K,18, GX24,      GY24,0.0,
251 K,19, GX25,      GY25,0.0,
252 K,20, DI45,      DI45,0.0,
253 K,21, GY25,      GX25,0.0,
254 K,22, GY24,      GX24,0.0,
255 K,23, GY23,      GX23,0.0,
256 K,24, GY22,      GX22,0.0,
257 K,25,DCIRD,      0.0,0.0,
258 K,26, GY22, (0.0-GX22),0.0,
259 K,27, GY23, (0.0-GX23),0.0,
260 K,28, GY24, (0.0-GX24),0.0,
261 K,29, GY25, (0.0-GX25),0.0,
262 K,30, DI45, (0.0-DI45),0.0,
263 K,31, GX25, (0.0-GY25),0.0,
264 K,32, GX24, (0.0-GY24),0.0,
265 K,33, GX23, (0.0-GY23),0.0,
266 K,34, GX22, (0.0-GY22),0.0,
267 K,35, 0.0,(0.0-DCIRD),0.0,
268 L,14,15,
269 LARC,16,15,1,DCIRD,
270 LARC,17,16,1,DCIRD,
271 LARC,18,17,1,DCIRD,
272 LARC,19,18,1,DCIRD,
273 LARC,20,19,1,DCIRD,
274 LARC,21,20,1,DCIRD,
275 LARC,22,21,1,DCIRD,
276 LARC,23,22,1,DCIRD,
277 LARC,24,23,1,DCIRD,
278 LARC,25,24,1,DCIRD,
279 LARC,26,25,1,DCIRD,
280 LARC,27,26,1,DCIRD,
281 LARC,28,27,1,DCIRD,
282 LARC,29,28,1,DCIRD,
283 LARC,30,29,1,DCIRD,
284 LARC,31,30,1,DCIRD,
285 LARC,32,31,1,DCIRD,
286 LARC,33,32,1,DCIRD,
287 LARC,34,33,1,DCIRD,
288 LARC,35,34,1,DCIRD,
289 L,12,35,
290 L,25,13,
291 LSEL,S,LINE,,12,22,
292 LSEL,A,LINE,, 9,
293 LSEL,A,LINE,,34,
294 AL,ALL,
295 LSEL,S,LINE,,23,33,
296 LSEL,A,LINE,, 8,
297 LSEL,A,LINE,,34,
298 AL,ALL,

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299 LSEL,ALL,
300 /COM, *****
301 /COM, Define thermal shunts
302 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
303 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
304 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
305 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
306 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
307 /COM, ( 84,85,86,87,88,89,90,91,92)
308 /COM, (A's 5 - 26)
309 /COM,
310 /COM, horizontal thermal shunt
311 K,36, 0.0, (0.0-THWLL),0.0,
312 K,37, 0.0, THWLL,0.0,
313 K,38, THWLL, (0.0-THWLL),0.0,
314 K,39, THWLL, 0.0,0.0,
315 K,40, THWLL, THWLL,0.0,
316 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
317 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
318 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
319 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
320 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
321 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
322 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
323 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
324 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
325 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
326 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
327 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
328 /COM, vertical thermal shunt
329 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
330 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
331 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
332 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
333 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
334 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
335 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
336 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
337 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
338 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
339 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
340 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
341 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
342 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
343 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
344 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
345 /COM, Lines; shunt widths, horizontal then vertical: (35-57)
346 L,36, 1,
347 L, 1,37,
348 L,38,39,
349 L,39,40,
350 L,41,42,
351 L,42,43,
352 L,44,45,
353 L,45,46,
354 L,47,48,
355 L,48,49,
356 L,50,51,
357 L,51,52,
358 L,53,54,
359 L,55,56,
360 L,57,58,
361 L,59,60,
362 L,37,40,
363 L, 1,39,
364 L,36,38,
365 L,61,62,
366 L,63,64,
367 L,65,66,
368 L,67,68,

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369 /COM, Lines; shunt edges, horizontal then vertical: (58-92)

370 L,38,41,
371 L,39,42,
372 L,40,43,
373 L,41,44,
374 L,42,45,
375 L,43,46,
376 L,44,47,
377 L,45,48,
378 L,46,49,
379 L,47,50,
380 L,48,51,
381 L,49,52,
382 L,26,50,
383 L,25,51,
384 L,52,24,
385 L,15,53,
386 L,16,54,
387 L,53,55,
388 L,54,56,
389 L,55,57,
390 L,56,58,
391 L,57,59,
392 L,58,60,
393 L,59,37,
394 L,60,40,
395 L,36,61,
396 L,38,62,
397 L,61,63,
398 L,62,64,
399 L,63,65,
400 L,64,66,
401 L,65,67,
402 L,66,68,
403 L,67,35,
404 L,68,34,

define areas for thermal shunts

405 /COM,
406 AL,35,53,37,52,
407 AL,36,52,38,51,
408 AL,37,58,39,59,
409 AL,38,59,40,60,
410 AL,39,61,41,62,
411 AL,40,62,42,63,
412 AL,41,64,43,65,
413 AL,42,65,44,66,
414 AL,43,67,45,68,
415 AL,44,68,46,69,
416 AL,45,70,23,71,
417 AL,46,71,22,72,
418 AL,73,47,74,13,
419 AL,75,48,76,47,
420 AL,77,49,78,48,
421 AL,79,50,80,49,
422 AL,81,51,82,50,
423 AL,83,54,84,53,
424 AL,85,55,86,54,
425 AL,87,56,88,55,
426 AL,89,57,90,56,
427 AL,91,32,92,57,

428 /COM, *****

429 /COM, Define tube guides
430 /COM, (K's 69 - 92)
431 /COM, (L's 93 - 136)
432 /COM, (A's 27 - 46)

433 /COM,
434 /COM, top guide

435 K,69, (THWLL+1.0*PITCH), (THWLL+4.0*PITCH),0.0,
436 K,70,(THWLL+1.0*PITCH+GWALL), (THWLL+4.0*PITCH),0.0,
437 K,71, (THWLL+1.0*PITCH), (THWLL+3.0*PITCH),0.0,
438 K,72,(THWLL+1.0*PITCH+GWALL), (THWLL+3.0*PITCH+GWALL),0.0,

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439 K,73, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH),0.0,
440 K,74, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH+GWALL),0.0,
441 K,75, (THWLL+3.0*PITCH), (THWLL+2.0*PITCH),0.0,
442 K,76, (THWLL+3.0*PITCH+GWALL), (THWLL+2.0*PITCH),0.0,
443 K,77, (THWLL+3.0*PITCH), (THWLL+1.0*PITCH),0.0,
444 K,78, (THWLL+3.0*PITCH+GWALL), (THWLL+1.0*PITCH+GWALL),0.0,
445 K,79, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH),0.0,
446 K,80, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH+GWALL),0.0,
447 /COM, bottom guide
448 K,81, (THWLL+4.0*PITCH), (-1.0*PITCH-THWLL),0.0,
449 K,82, (THWLL+4.0*PITCH), (-1.0*PITCH-GWALL-THWLL),0.0,
450 K,83, (THWLL+3.0*PITCH), (-1.0*PITCH-THWLL),0.0,
451 K,84, (THWLL+3.0*PITCH+GWALL), (-1.0*PITCH-GWALL-THWLL),0.0,
452 K,85, (THWLL+3.0*PITCH), (-2.0*PITCH-THWLL),0.0,
453 K,86, (THWLL+3.0*PITCH+GWALL), (-2.0*PITCH-THWLL),0.0,
454 K,87, (THWLL+2.0*PITCH), (-3.0*PITCH-THWLL),0.0,
455 K,88, (THWLL+2.0*PITCH), (-3.0*PITCH-GWALL-THWLL),0.0,
456 K,89, (THWLL+1.0*PITCH), (-3.0*PITCH-THWLL),0.0,
457 K,90, (THWLL+1.0*PITCH+GWALL), (-3.0*PITCH-GWALL-THWLL),0.0,
458 K,91, (THWLL+1.0*PITCH), (-4.0*PITCH-THWLL),0.0,
459 K,92, (THWLL+1.0*PITCH+GWALL), (-4.0*PITCH-THWLL),0.0,
460 /COM,
461 /COM, top guide
462 L,69,17,
463 L,18,70,
464 L,71,69,
465 L,70,72,
466 L,73,71,
467 L,72,74,
468 L,20,73,
469 L,74,19,
470 L,75,20,
471 L,21,76,
472 L,77,75,
473 L,76,78,
474 L,79,77,
475 L,78,80,
476 L,23,79,
477 L,80,22,
478 /COM, bottom guide
479 L,81,27,
480 L,28,82,
481 L,83,81,
482 L,82,84,
483 L,85,83,
484 L,84,86,
485 L,30,85,
486 L,86,29,
487 L,87,30,
488 L,31,88,
489 L,89,87,
490 L,88,90,
491 L,91,89,
492 L,90,92,
493 L,33,91,
494 L,92,32,
495 /COM, Guide thickness lines
496 L,69,70,
497 L,71,72,
498 L,73,74,
499 L,75,76,
500 L,77,78,
501 L,79,80,
502 L,82,81,
503 L,84,83,
504 L,86,85,
505 L,88,87,
506 L,90,89,
507 L,92,91,
508 /COM, Guide steel

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509 AL, 93,125, 94, 15,
510 AL, 95,126, 96,125,
511 AL, 97,127, 98,126,
512 AL, 99, 17,100,127,
513 AL,101,128,102, 18,
514 AL,103,129,104,128,
515 AL,105,130,106,129,
516 AL,107, 20,108,130,
517 AL,109,131,110, 25,
518 AL,111,132,112,131,
519 AL,113,133,114,132,
520 AL,115, 27,116,133,
521 AL,117,134,118, 28,
522 AL,119,135,120,134,
523 AL,121,136,122,135,
524 AL,123, 30,124,136,
525 /COM, Guide gaps
526 AL, 16, 94, 96, 98,100,
527 AL, 19,102,104,106,108,
528 AL, 26,110,112,114,116,
529 AL, 29,118,120,122,124,
530 /COM, *****
531 /COM, Define shell gaps at the exterior of the tube array
532 /COM, (L's 137 - 140)
533 /COM, (A's 47 - 50)
534 /COM,
535 L, 54, 69,
536 L, 79, 52,
537 L, 50, 81,
538 L, 91, 68,
539 /COM,
540 AL, 14, 74,137, 93,
541 AL, 21,107,138, 72,
542 AL, 24, 70,139,109,
543 AL, 31,123,140, 92,
544 /COM, *****
545 /COM, Define center full-tube
546 /COM, (K's 93 - 100)
547 /COM, (L's 141 - 152)
548 /COM, (A's 51 - 56)
549 K, 93, THWLL, THWLL,0.0,
550 K, 94, THWLL, (THWLL+PITCH),0.0,
551 K, 95, (THWLL+PITCH), (THWLL+PITCH),0.0,
552 K, 96, (THWLL+PITCH), THWLL,0.0,
553 K, 97, (THWLL+SWALL), (THWLL+SWALL),0.0,
554 K, 98, (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
555 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
556 K,100,(PITCH+THWLL-SWALL), (THWLL+SWALL),0.0,
557 L, 93, 97,
558 L, 94, 98,
559 L, 96,100,
560 L, 95, 99,
561 L, 96, 93,
562 L,100, 97,
563 L, 98, 99,
564 L, 94, 95,
565 L, 93, 94,
566 L, 97, 98,
567 L, 99,100,
568 L, 95, 96,
569 AL,149,141,150,142,
570 AL,145,143,146,141,
571 AL,152,144,151,143,
572 AL,148,142,147,144,
573 AL,150,146,151,147,
574 /COM, *****
575 /COM, Set element shapes and sizes for tubes
576 /COM, 8x8 mesh in fuel with 2
577 /COM, divisions per tube layer
578 ESHAPE,2,

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579 ESIZE,,1,
580 LSEL,S,LINE,,145,152,1,
581 LESIZE,ALL,,, 8,
582 LSEL,S,LINE,,141,144,1,
583 LESIZE,ALL,,, 2,
584 LSEL,ALL,
585 /COM,
586 /COM,          Mesh areas
587 /COM,          first fuel, then stainless tubes
588 MAT,14,
589 TYPE,1,
590 AMESH,55,
591 MAT, 1,
592 TYPE,1,
593 AMESH,51,54,1,
594 /COM, *****
595 /COM,          Copy tube mesh
596 /COM,
597 /COM,          center full tube side, above, and below
598 /COM,          (A's 56 - 60 = Side 1)
599 AGEN,2,51,55,1,(1.0*PITCH),0.0,0.0,0,0,
600 /COM,          (A's 61 - 65 = Side 2)
601 AGEN,2,51,55,1,(2.0*PITCH),0.0,0.0,0,0,
602 /COM,          (A's 66 - 70 = Side 3)
603 AGEN,2,51,55,1,(3.0*PITCH),0.0,0.0,0,0,
604 /COM,
605 /COM,          (A's 71 - 75 = up 1)
606 AGEN,2,51,55,1,0.0,(1.0*PITCH),0.0,0,0,
607 /COM,          (A's 76 - 80 = up 2)
608 AGEN,2,51,55,1,0.0,(2.0*PITCH),0.0,0,0,
609 /COM,          (A's 81 - 85 = up 3)
610 AGEN,2,51,55,1,0.0,(3.0*PITCH),0.0,0,0,
611 /COM,
612 /COM,          (A's 86 - 90 = down 1)
613 AGEN,2,51,55,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
614 /COM,          (A's 91 - 95 = down 2)
615 AGEN,2,51,55,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
616 /COM,          (A's 96 - 100 = down 3)
617 AGEN,2,51,55,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
618 /COM,          (A's 101 - 105 = down 4)
619 AGEN,2,51,55,1,0.0,(-4.0*PITCH-TWALL),0.0,0,0,
620 /COM,
621 /COM,          (A's 106 - 110 = up 1)
622 AGEN,2,56,60,1,0.0,(1.0*PITCH),0.0,0,0,
623 /COM,          (A's 111 - 115 = up 2)
624 AGEN,2,56,60,1,0.0,(2.0*PITCH),0.0,0,0,
625 /COM,
626 /COM,          (A's 116 - 120 = down 1)
627 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
628 /COM,          (A's 121 - 125 = down 2)
629 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
630 /COM,          (A's 126 - 130 = down 3)
631 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
632 /COM,
633 /COM,          (A's 131 - 135 = up 1)
634 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
635 /COM,          (A's 136 - 140 = up 2)
636 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
637 /COM,
638 /COM,          (A's 141 - 145 = down 1)
639 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
640 /COM,          (A's 146 - 150 = down 2)
641 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
642 /COM,          (A's 151 - 155 = down 3)
643 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
644 /COM,
645 /COM,          (A's 156 - 160 = down 1)
646 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
647 /COM,
648 /COM, *****

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649 /COM,          Create mesh in tube guides, thermal shunts
650 /COM,          Set mesh size for gaps.....
651 ESIZE,,2,
652 LSEL,S,LINE,, 35, 57,1,
653 LSEL,A,LINE,,125,136,1,
654 LSEL,A,LINE,, 13, 15,2,
655 LSEL,A,LINE,, 17, 18,1,
656 LSEL,A,LINE,, 20, 22,2,
657 LSEL,A,LINE,, 23, 25,2,
658 LSEL,A,LINE,, 27, 28,1,
659 LSEL,A,LINE,, 30, 32,2,
660 LESIZE,ALL,,, 2,
661 LSEL,S,LINE,, 70, 74,1,
662 LSEL,A,LINE,, 91, 94,1,
663 LSEL,A,LINE,,107,110,1,
664 LSEL,A,LINE,,123,124,1,
665 LESIZE,ALL,,, 3,
666 LSEL,S,LINE,, 14, 21,7,
667 LSEL,A,LINE,, 24, 31,7,
668 LSEL,A,LINE,, 58, 69,1,
669 LSEL,A,LINE,, 75, 90,1,
670 LSEL,A,LINE,, 95,106,1,
671 LSEL,A,LINE,,111,122,1,
672 LSEL,A,LINE,,137,140,1,
673 LESIZE,ALL,,, 8,
674 LSEL,S,LINE,, 16, 19,3,
675 LSEL,A,LINE,, 26, 29,3,
676 LESIZE,ALL,,, 16,
677 /COM,          MESH CORNER GUIDES
678 ESHAPE,2,
679 ESIZE,,1,
680 MAT,2,
681 TYPE,1,
682 AMESH,27,42,1,
683 /COM,          MESH THERMAL SHUNTS
684 ESHAPE,2,
685 ESIZE,,1,
686 MAT,13,
687 TYPE,1,
688 AMESH, 5,26,1,
689 NUMMRG,NODE,
690 NUMMRG,KP,
691 /COM,          *****
692 /COM,          Create mesh in UCF inner shell
693 /COM,          (L's 105,108 ????)
694 LSEL,S,LINE,,13,22,1,
695 LCCAT,ALL,
696 LSEL,S,LINE,,23,32,1,
697 LCCAT,ALL,
698 LSEL,ALL,
699 LESIZE,8,,,60,
700 LESIZE,9,,,60,
701 LESIZE,12,,, 3,
702 LESIZE,33,,, 3,
703 MAT,2,
704 TYPE,1,
705 AMESH,3,4,1
706 /COM,          Delete concatanated lines
707 /COM,          (L's freed up 105,108 ????)
708 /COM,          LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES
709 /COM,
710 LSEL,S,LINE,,6,7,1,
711 LESIZE,ALL,,,60,
712 LSEL,ALL,
713 LESIZE, 5,,, 3,
714 LESIZE,10,,, 3,
715 LESIZE,11,,, 3,
716 MAT,3,
717 TYPE,1,
718 AMESH,1,2,1,

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719 NUMMRG,NODE,
720 NUMMRG,KP,
721 /COM, *****
722 /COM, Create mesh in empty basket spaces
723 ESIZE,0.1,
724 ESHAPE,0,
725 MAT,7,
726 TYPE,1,
727 AMESH,43,50,1,
728 NUMMRG,NODE,
729 NUMMRG,KP,
730 /COM, *****
731 /COM, Create radiation surface elements
732 /COM, Basket spaces
733 MAT,2,
734 TYPE,17,
735 LMESH, 14, 16,2,
736 LMESH, 19, 21,2,
737 LMESH, 24, 26,2,
738 LMESH, 29, 31,2,
739 LMESH, 93, 94,1,
740 LMESH, 96,124,2,
741 LMESH,107,109,2,
742 LMESH,123,
743 MAT,1,
744 TYPE,17,
745 LMESH,137,140,1,
746 MAT,13,
747 TYPE,17,
748 LMESH,70,72,2,
749 LMESH,74,
750 LMESH,92,
751 /COM,
752 FINISH
753 /COM, *****
754 /COM, Create element mesh plots to illustrate model
755 /COM, View mesh for entire model
756 /RESET
757 /TRIAD,OFF,
758 /NUM, 1,
759 /PNUM,MAT, 1,
760 /TYPE,HIDP,
761 /GLINE,,0,
762 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
763 /TITLE, 44 BWR UCF/Waste Package - 1/2 FEM Model
764 /SHOW,meshfull,grph,1,8,
765 EPLOT
766 ESEL,U,MAT,, 7,
767 /SHOW,meshgap,grph,1,8,
768 EPLOT
769 /COM, View mesh for radiation substructure
770 /PNUM,MAT, 0,
771 /PNUM,TYPE, 1,
772 ESEL,S,TYPE,,17,
773 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
774 /SHOW,meshrad,grph,1,8,
775 EPLOT
776 ESEL,ALL,
777 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
778 /COM, *****
779 /COM, Generate super-elements
780 /AUX12,
781 ESEL,S,TYPE,,17,
782 NSLE,S,
783 STEF,5.67E-8,
784 GEOM,1,0,
785 VTYPE,0,800,
786 WRITE,spaces,
787 ESEL,ALL,
788 NSEL,ALL,

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789 FINISH
790 /PREP7,
791 TYPE,18,
792 SE,spaces,
793 /COM, Delete radiation edge elements
794 LSEL,S,TYPE,,17,
795 LCLEAR,ALL,
796 LSEL,ALL,
797 FINISH
798 /COM, *****
799 /COM, Set solution parameters and apply B.C.'s
800 /COM,
801 /COM, Solve steady-state for initial conditions
802 /COM, with WP surface equal to drift ambient
803 /COM, temperature from repository model.
804 /SOLU
805 ANTYPE,TRAN,NEW,
806 NROPT,AUTO,
807 TRNOPT,FULL,
808 TOFFST,273.15,
809 LSEL,S,LINE,,6,
810 LSEL,A,LINE,,7,
811 NSLL,S,1,
812 D,ALL,TEMP,DFAMBT,
813 LSEL,ALL,
814 NSEL,ALL,
815 ASEL,S,MAT,,14,
816 ESLA,S,
817 BFE,ALL,HGEN,,(FUEL(TM_START)),
818 ASEL,ALL,
819 ESEL,ALL,
820 TIMINT,OFF,
821 TIME,1e-6,
822 AUTOTS,ON,
823 KBC,0,
824 SOLVE
825 /COM, Solve steady-state for initial conditions
826 /COM, with WP surface temperatures from repository
827 /COM, steady-state solution.
828 LSEL,S,LINE,,6,
829 LSEL,A,LINE,,7,
830 NSLL,S,1,
831 DDELE,ALL,TEMP,
832 LSEL,ALL,
833 NSEL,ALL,
834 DK,11,TEMP,(WPTOP(TM_START)),,1,
835 DK,10,TEMP,(WPSID(TM_START)),,1,
836 DK,9,TEMP,(WPBOT(TM_START)),,1,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,2e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM, *****
848 /COM, Set time integration parameters
849 TIMINT,ON,
850 AUTOTS,ON,
851 /COM, Time substep ranges from 10 sec to 1/4 loadstep
852 NSUBST,10,40,5,ON
853 /COM, Begin Transient
854 /COM, Apply loads and solve for 0 to .9 years
855 *DO,TM,TM_START,TMEO,TMIO
856 TIME,TM,
857 ASEL,S,MAT,,14,
858 ESLA,S,

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859     BFE,ALL,HGEN,,(FUEL(TM)),
860     ASEL,ALL
861     ESEL,ALL
862     DK,11,TEMP,(WPTOP(TM)),,1,
863     DK,10,TEMP,(WPSID(TM)),,1,
864     DK, 9,TEMP,(WPBOT(TM)),,1,
865     SOLVE
866 *ENDDO
867 /COM,          Apply loads and solve for 1 to 9 years
868 *DO,TM,TME1,TME9,TM11
869     TIME,TM,
870     ASEL,S,MAT,,14,
871     ESLA,S,
872     BFE,ALL,HGEN,,(FUEL(TM)),
873     ASEL,ALL
874     ESEL,ALL
875     DK,11,TEMP,(WPTOP(TM)),,1,
876     DK,10,TEMP,(WPSID(TM)),,1,
877     DK, 9,TEMP,(WPBOT(TM)),,1,
878     SOLVE
879 *ENDDO
880 /COM,          Apply loads and solve for 10 to 90 years
881 *DO,TM,TME10,TME90,TM110
882     TIME,TM,
883     ASEL,S,MAT,,14,
884     ESLA,S,
885     BFE,ALL,HGEN,,(FUEL(TM)),
886     ASEL,ALL
887     ESEL,ALL
888     DK,11,TEMP,(WPTOP(TM)),,1,
889     DK,10,TEMP,(WPSID(TM)),,1,
890     DK, 9,TEMP,(WPBOT(TM)),,1,
891     SOLVE
892 *ENDDO
893 /COM,          Apply loads and solve for 100 to 1000 years
894 *DO,TM,TME100,TME1000,TM1100
895     TIME,TM,
896     ASEL,S,MAT,,14,
897     ESLA,S,
898     BFE,ALL,HGEN,,(FUEL(TM)),
899     ASEL,ALL
900     ESEL,ALL
901     DK,11,TEMP,(WPTOP(TM)),,1,
902     DK,10,TEMP,(WPSID(TM)),,1,
903     DK, 9,TEMP,(WPBOT(TM)),,1,
904     SOLVE
905 *ENDDO
906 FINISH
907 SAVE,
908 /COM,          *****
909 /COM,          Create element contour plots of solution results
910 /COM,
911 /COM,          Sort through solution results for time of max temp.
912 /POST26,
913 NSOL,2,(NODE((THWLL+SCCELL),(-1.0*THWLL-SCCELL),0.0)),TEMP,,peakclad,
914 STORE,NEW,
915 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
916 FINISH
917 /POST1,
918 /COM,          Create temperature contour plots of WP at peak
919 /RESET
920 /TRIAD,OFF,
921 /NUM, 1,
922 /PNUM,MAT, 1,
923 /TYPE,HIDP,
924 /GLINE,-1,
925 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
926 ESEL,U,MAT,,7,
927 SET,NEAR,,,TMTMAX
928 /TITLE, 44 BUR UCF/WP at Time of Peak Temp. (XTMTMAX/3.15576E7X years)

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929 /SHOW,solupk,grph,0,8,
930 /CONTOUR,1,128,AUTO,
931 PLNSOL,TEMP,
932 /COM,          Create temperature contour plots at 10, 50, and 100 yrs
933 SET,NEAR,,,,TME10,
934 /TITLE, 44 BWR UCF/WP at 10 years
935 /SHOW,solu10,grph,0,8,
936 /CONTOUR,1,128,USER,
937 PLNSOL,TEMP,
938 SET,NEAR,,,,TME50,
939 /TITLE, 44 BWR UCF/WP at 50 years
940 /SHOW,solu50,grph,0,8,
941 /CONTOUR,1,128,USER,
942 PLNSOL,TEMP,
943 SET,NEAR,,,,TME100,
944 /TITLE, 44 BWR UCF/WP at 100 years
945 /SHOW,solu100,grph,0,8,
946 /CONTOUR,1,128,USER,
947 PLNSOL,TEMP,
948 ESEL,ALL,
949 FINISH
950 /COM,          *****
951 /COM,          Set some needed variable values:
952 /COM,
953 DATM=THWLL+SCELL
954 DAT1=DATM+PITCH
955 DAT2=DATM+(2.0*PITCH)
956 DAT3=DATM+(3.0*PITCH)
957 /COM,
958 /COM,          *****
959 /COM,          Print time/temperature output at specific locations
960 /COM,          Save profile from center to edge
961 /COM,
962 /COM,          Variable Legend: A01i000
963 /COM,          c = center of assembly
964 /COM,          h = halfway between center and tube
965 /COM,          s = inside structural stainless tube layer
966 /COM,          t = stainless tube cladding
967 /COM,          g = tube guide
968 /COM,          i = inner barrier of DC
969 /COM,          o = outer barrier of DC
970 /COM,          ## = ID number of assembly (01 is center)
971 /COM,          i = side of assembly toward center of WP
972 /COM,          o = side of assembly toward edge of WP
973 /COM,          000 = profile center down
974 /COM,          045 = profile 45 deg down
975 /COM,          090 = profile center side
976 /COM,          135 = profile 45 deg up
977 /COM,          180 = profile center up
978 /POST26,
979 NUMVAR,30,
980 /COM,
981 /COM,          *****
982 /COM,          *Temperature Profile from center offset to bottom of WP (0 deg.)*
983 /COM,          *****
984 NSOL, 2,(NODE(          DATM,          0.0,0.0)),TEMP,,ts1i000,
985 NSOL, 3,(NODE(          DATM,          (0.0-THWLL),0.0)),TEMP,,t01i000,
986 NSOL, 4,(NODE(          DATM,          (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
987 NSOL, 5,(NODE(          DATM,          (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
988 NSOL, 6,(NODE(          DATM,          (0.0-DATM),0.0)),TEMP,,c01i000,
989 NSOL, 7,(NODE(          DATM,          (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
990 NSOL, 8,(NODE(          DATM,          (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
991 NSOL, 9,(NODE(          DATM,          (0.0-DATM-SCELL),0.0)),TEMP,,t01o000,
992 NSOL,10,(NODE(          DATM,          (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
993 NSOL,11,(NODE(          DATM,          (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
994 NSOL,12,(NODE(          DATM,          (0.0-DAT1),0.0)),TEMP,,c09i000,
995 NSOL,13,(NODE(          DATM,          (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
996 NSOL,14,(NODE(          DATM,          (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
997 NSOL,15,(NODE(          DATM,          (0.0-DAT1-SCELL),0.0)),TEMP,,t09o000,
998 NSOL,16,(NODE(          DATM,          (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,

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999 NSOL,17,(NODE(      DATM,      (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1000 NSOL,18,(NODE(      DATM,      (0.0-DAT2),0.0)),TEMP,,c15i000,
1001 NSOL,19,(NODE(      DATM,      (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1002 NSOL,20,(NODE(      DATM,      (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1003 NSOL,21,(NODE(      DATM,      (0.0-DAT2-SCCELL),0.0)),TEMP,,t15o000,
1004 NSOL,22,(NODE(      DATM,      (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1005 NSOL,23,(NODE(      DATM,      (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1006 NSOL,24,(NODE(      DATM,      (0.0-DAT3),0.0)),TEMP,,c21i000,
1007 NSOL,25,(NODE(      DATM,      (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1008 NSOL,26,(NODE(      DATM,      (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1009 NSOL,27,(NODE(      DATM,      (0.0-DAT3-SCCELL),0.0)),TEMP,,t21o000,
1010 NSOL,28,(NODE(      DATM,      (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1011 NSOL,29,(NODE(      DATM,      (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1012 NSOL,30,(NODE(      DATM,      (0.0-DCRAD),0.0)),TEMP,,o21o000,
1013 PRVAR, 2, 3, 4, 5, 6, 7,
1014 PRVAR, 8, 9,10,11,12,13,
1015 PRVAR,14,15,16,17,18,19,
1016 PRVAR,20,21,22,23,24,25,
1017 PRVAR,26,27,28,29,30,
1018 /COM,
1019 /COM, *****
1020 /COM, * Temperature Profile from center to lower right (45 deg.) *
1021 /COM, *****
1022 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts1i045,
1023 NSOL, 3,(NODE(      THWLL,      (0.0-THWLL),0.0)),TEMP,,t01i045,
1024 NSOL, 4,(NODE(      (THWLL+SWALL),      (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1025 NSOL, 5,(NODE(      (DATM-QCELL),      (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1026 NSOL, 6,(NODE(      DATM,      (0.0-DATM),0.0)),TEMP,,c01i045,
1027 NSOL, 7,(NODE(      (DATM+QCELL),      (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1028 NSOL, 8,(NODE(      (DATM+HCELL),      (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1029 NSOL, 9,(NODE(      (DATM+SCCELL),      (0.0-DATM-SCCELL),0.0)),TEMP,,t01o045,
1030 NSOL,10,(NODE(      (DAT1-HCELL),      (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1031 NSOL,11,(NODE(      (DAT1-QCELL),      (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1032 NSOL,12,(NODE(      DAT1,      (0.0-DAT1),0.0)),TEMP,,c11i045,
1033 NSOL,13,(NODE(      (DAT1+QCELL),      (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1034 NSOL,14,(NODE(      (DAT1+HCELL),      (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1035 NSOL,15,(NODE(      (DAT1+SCCELL),      (0.0-DAT1-SCCELL),0.0)),TEMP,,t11o045,
1036 NSOL,16,(NODE(      (DAT2-HCELL),      (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1037 NSOL,17,(NODE(      (DAT2-QCELL),      (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1038 NSOL,18,(NODE(      DAT2,      (0.0-DAT2),0.0)),TEMP,,c19i045,
1039 NSOL,19,(NODE(      (DAT2+QCELL),      (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1040 NSOL,20,(NODE(      (DAT2+HCELL),      (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1041 NSOL,21,(NODE(      (DAT2+SCCELL),      (0.0-DAT2-SCCELL),0.0)),TEMP,,t19o045,
1042 NSOL,22,(NODE(      DM45,      (-1.0*DM45),0.0)),TEMP,,i19o045,
1043 NSOL,23,(NODE(      DM45,      (-1.0*DM45),0.0)),TEMP,,o19o045,
1044 /COM, Add centers of assemblies 13 and 17
1045 NSOL,24,(NODE(      DAT2,      (-1.0*DAT1),0.0)),TEMP,,c13i045,
1046 NSOL,25,(NODE(      DAT1,      (-1.0*DAT2),0.0)),TEMP,,c17i045,
1047 PRVAR, 2, 3, 4, 5, 6, 7,
1048 PRVAR, 8, 9,10,11,12,13,
1049 PRVAR,14,15,16,17,18,19,
1050 PRVAR,20,21,22,23,24,25,
1051 /COM,
1052 /COM, *****
1053 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1054 /COM, *****
1055 NSOL, 2,(NODE(      0.0,(0.0-DATM),0.0)),TEMP,,ts2i180,
1056 NSOL, 3,(NODE(      (THWLL),      (0.0-DATM),0.0)),TEMP,,t02i180,
1057 NSOL, 4,(NODE(      (THWLL+SWALL),      (0.0-DATM),0.0)),TEMP,,s02i180,
1058 NSOL, 5,(NODE(      (DATM-QCELL),      (0.0-DATM),0.0)),TEMP,,h02i180,
1059 NSOL, 6,(NODE(      (DATM),      (0.0-DATM),0.0)),TEMP,,c02i180,
1060 NSOL, 7,(NODE(      (DATM+QCELL),      (0.0-DATM),0.0)),TEMP,,h02o180,
1061 NSOL, 8,(NODE(      (DATM+HCELL),      (0.0-DATM),0.0)),TEMP,,s02o180,
1062 NSOL, 9,(NODE(      (DATM+SCCELL),      (0.0-DATM),0.0)),TEMP,,t02o180,
1063 NSOL,10,(NODE(      (DAT1-HCELL),      (0.0-DATM),0.0)),TEMP,,s10i180,
1064 NSOL,11,(NODE(      (DAT1-QCELL),      (0.0-DATM),0.0)),TEMP,,h10i180,
1065 NSOL,12,(NODE(      (DAT1),      (0.0-DATM),0.0)),TEMP,,c10i180,
1066 NSOL,13,(NODE(      (DAT1+QCELL),      (0.0-DATM),0.0)),TEMP,,h10o180,
1067 NSOL,14,(NODE(      (DAT1+HCELL),      (0.0-DATM),0.0)),TEMP,,s10o180,
1068 NSOL,15,(NODE(      (DAT1+SCCELL),      (0.0-DATM),0.0)),TEMP,,t10o180,

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1069 NSOL,16,(NODE(      (DAT2-HCELL),(0.0-DATM),0.0)),TEMP,,s16i180,
1070 NSOL,17,(NODE(      (DAT2-QCELL),(0.0-DATM),0.0)),TEMP,,h16i180,
1071 NSOL,18,(NODE(      (DAT2), (0.0-DATM),0.0)),TEMP,,c16i180,
1072 NSOL,19,(NODE(      (DAT2+QCELL),(0.0-DATM),0.0)),TEMP,,h16o180,
1073 NSOL,20,(NODE(      (DAT2+HCELL),(0.0-DATM),0.0)),TEMP,,s16o180,
1074 NSOL,21,(NODE(      (DAT2+SCELL),(0.0-DATM),0.0)),TEMP,,t16o180,
1075 NSOL,22,(NODE(      (DAT3-HCELL),(0.0-DATM),0.0)),TEMP,,s22i180,
1076 NSOL,23,(NODE(      (DAT3-QCELL),(0.0-DATM),0.0)),TEMP,,h22i180,
1077 NSOL,24,(NODE(      (DAT3), (0.0-DATM),0.0)),TEMP,,c22i180,
1078 NSOL,25,(NODE(      (DAT3+QCELL),(0.0-DATM),0.0)),TEMP,,h22o180,
1079 NSOL,26,(NODE(      (DAT3+HCELL),(0.0-DATM),0.0)),TEMP,,s22o180,
1080 NSOL,27,(NODE(      (DAT3+SCELL),(0.0-DATM),0.0)),TEMP,,t22o180,
1081 NSOL,28,(NODE((DCRAD-OWALL-IWALL),(0.0-DATM),0.0)),TEMP,,i22i180,
1082 NSOL,29,(NODE(      (DCRAD-OWALL),(0.0-DATM),0.0)),TEMP,,i22o180,
1083 NSOL,30,(NODE(      (DCRAD),(0.0-DATM),0.0)),TEMP,,o22o180,
1084 PRVAR, 2, 3, 4, 5, 6, 7,
1085 PRVAR, 8, 9,10,11,12,13,
1086 PRVAR,14,15,16,17,18,19,
1087 PRVAR,20,21,22,23,24,25,
1088 PRVAR,26,27,28,29,30,
1089 /COM, *****
1090 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1091 /COM, *****
1092 NSOL, 2,(NODE(      0.0,      DATM,0.0)),TEMP,,ts2i180,
1093 NSOL, 3,(NODE(      (THWLL),      DATM,0.0)),TEMP,,t02i180,
1094 NSOL, 4,(NODE(      (THWLL+SWALL),      DATM,0.0)),TEMP,,s02i180,
1095 NSOL, 5,(NODE(      (DATM-QCELL),      DATM,0.0)),TEMP,,h02i180,
1096 NSOL, 6,(NODE(      (DATM),      DATM,0.0)),TEMP,,c02i180,
1097 NSOL, 7,(NODE(      (DATM+QCELL),      DATM,0.0)),TEMP,,h02o180,
1098 NSOL, 8,(NODE(      (DATM+HCELL),      DATM,0.0)),TEMP,,s02o180,
1099 NSOL, 9,(NODE(      (DATM+SCELL),      DATM,0.0)),TEMP,,t02o180,
1100 NSOL,10,(NODE(      (DAT1-HCELL),      DATM,0.0)),TEMP,,s10i180,
1101 NSOL,11,(NODE(      (DAT1-QCELL),      DATM,0.0)),TEMP,,h10i180,
1102 NSOL,12,(NODE(      (DAT1),      DATM,0.0)),TEMP,,c10i180,
1103 NSOL,13,(NODE(      (DAT1+QCELL),      DATM,0.0)),TEMP,,h10o180,
1104 NSOL,14,(NODE(      (DAT1+HCELL),      DATM,0.0)),TEMP,,s10o180,
1105 NSOL,15,(NODE(      (DAT1+SCELL),      DATM,0.0)),TEMP,,t10o180,
1106 NSOL,16,(NODE(      (DAT2-HCELL),      DATM,0.0)),TEMP,,s16i180,
1107 NSOL,17,(NODE(      (DAT2-QCELL),      DATM,0.0)),TEMP,,h16i180,
1108 NSOL,18,(NODE(      (DAT2),      DATM,0.0)),TEMP,,c16i180,
1109 NSOL,19,(NODE(      (DAT2+QCELL),      DATM,0.0)),TEMP,,h16o180,
1110 NSOL,20,(NODE(      (DAT2+HCELL),      DATM,0.0)),TEMP,,s16o180,
1111 NSOL,21,(NODE(      (DAT2+SCELL),      DATM,0.0)),TEMP,,t16o180,
1112 NSOL,22,(NODE(      (DAT3-HCELL),      DATM,0.0)),TEMP,,s22i180,
1113 NSOL,23,(NODE(      (DAT3-QCELL),      DATM,0.0)),TEMP,,h22i180,
1114 NSOL,24,(NODE(      (DAT3),      DATM,0.0)),TEMP,,c22i180,
1115 NSOL,25,(NODE(      (DAT3+QCELL),      DATM,0.0)),TEMP,,h22o180,
1116 NSOL,26,(NODE(      (DAT3+HCELL),      DATM,0.0)),TEMP,,s22o180,
1117 NSOL,27,(NODE(      (DAT3+SCELL),      DATM,0.0)),TEMP,,t22o180,
1118 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1119 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1120 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1121 PRVAR, 2, 3, 4, 5, 6, 7,
1122 PRVAR, 8, 9,10,11,12,13,
1123 PRVAR,14,15,16,17,18,19,
1124 PRVAR,20,21,22,23,24,25,
1125 PRVAR,26,27,28,29,30,
1126 /COM,
1127 /COM, *****
1128 /COM, * Temperature Profile from center to upper right (135 deg.) *
1129 /COM, *****
1130 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1131 NSOL, 3,(NODE(      THWLL,      (THWLL),0.0)),TEMP,,t02i135,
1132 NSOL, 4,(NODE(      (THWLL+SWALL),      (THWLL+SWALL),0.0)),TEMP,,s02i135,
1133 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1134 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1135 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1136 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1137 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o135,
1138 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,

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1139 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1140 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1141 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1142 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1143 NSOL,15,(NODE(      (DAT1+SCELL),      (DAT1+SCELL),0.0)),TEMP,,t12o135,
1144 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1145 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1146 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1147 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1148 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1149 NSOL,21,(NODE(      (DAT2+SCELL),      (DAT2+SCELL),0.0)),TEMP,,t20o135,
1150 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1151 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1152 /COM,      Add centers of assemblies 13 and 17
1153 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1154 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1155 PRVAR, 2, 3, 4, 5, 6, 7,
1156 PRVAR, 8, 9,10,11,12,13,
1157 PRVAR,14,15,16,17,18,19,
1158 PRVAR,20,21,22,23,24,25,
1159 /COM,
1160 /COM,      *****
1161 /COM,      *Temperature Profile from center offset to top of WP (180 deg.)*
1162 /COM,      *****
1163 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1164 NSOL, 3,(NODE(      DATM,      (THWLL),0.0)),TEMP,,t02i180,
1165 NSOL, 4,(NODE(      DATM,      (THWLL+SWALL),0.0)),TEMP,,s02i180,
1166 NSOL, 5,(NODE(      DATM,      (DATM-QCELL),0.0)),TEMP,,h02i180,
1167 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1168 NSOL, 7,(NODE(      DATM,      (DATM+QCELL),0.0)),TEMP,,h02o180,
1169 NSOL, 8,(NODE(      DATM,      (DATM+HCELL),0.0)),TEMP,,s02o180,
1170 NSOL, 9,(NODE(      DATM,      (DATM+SCELL),0.0)),TEMP,,t02o180,
1171 NSOL,10,(NODE(      DATM,      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1172 NSOL,11,(NODE(      DATM,      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1173 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1174 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1175 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1176 NSOL,15,(NODE(      DATM,      (DAT1+SCELL),0.0)),TEMP,,t10o180,
1177 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1178 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1179 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1180 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1181 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1182 NSOL,21,(NODE(      DATM,      (DAT2+SCELL),0.0)),TEMP,,t16o180,
1183 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1184 NSOL,23,(NODE(      DATM,      (DAT3-QCELL),0.0)),TEMP,,h22i180,
1185 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1186 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,
1187 NSOL,26,(NODE(      DATM,      (DAT3+HCELL),0.0)),TEMP,,s22o180,
1188 NSOL,27,(NODE(      DATM,      (DAT3+SCELL),0.0)),TEMP,,t22o180,
1189 NSOL,28,(NODE(      DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1190 NSOL,29,(NODE(      DATM,      (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1191 NSOL,30,(NODE(      DATM,      (DCRAD),0.0)),TEMP,,o22o180,
1192 PRVAR, 2, 3, 4, 5, 6, 7,
1193 PRVAR, 8, 9,10,11,12,13,
1194 PRVAR,14,15,16,17,18,19,
1195 PRVAR,20,21,22,23,24,25,
1196 PRVAR,26,27,28,29,30,
1197 FINISH
1198 /COM,      *****
1199 /COM,      End of batch input file
1200 /COM,      *****
1201 /EXIT,
1202 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

/INPUT FILE= /ansys50a/docu/start.ans LINE= 0

ANSYS STARTUP FILE start.ans

ABBREVIATION= K1 /pnum,kp ,1,
 ABBREVIATION= K0 /pnum,kp ,0,
 ABBREVIATION= L1 /pnum,line,1,
 ABBREVIATION= L0 /pnum,line,0,
 ABBREVIATION= A1 /pnum,area,1,
 ABBREVIATION= A0 /pnum,area,0,
 ABBREVIATION= V1 /pnum,volu,1,
 ABBREVIATION= V0 /pnum,volu,0,
 ABBREVIATION= N1 /pnum,node,1,
 ABBREVIATION= N0 /pnum,node,0,
 ABBREVIATION= E1 /pnum,elem,1,
 ABBREVIATION= E0 /pnum,elem,0,
 ABBREVIATION= M1 /pnum,mat ,1,
 ABBREVIATION= M0 /pnum,mat ,0,
 ABBREVIATION= R1 /pnum,real,1,
 ABBREVIATION= R0 /pnum,real,0,
 ABBREVIATION= T1 /pnum,type,1,
 ABBREVIATION= T0 /pnum,type,0,
 ABBREVIATION= C1 /number,1,
 ABBREVIATION= C0 /number,0,
 ABBREVIATION= INP /input,,inp,
 ABBREVIATION= X3D /show,3d,
 ABBREVIATION= X11 /show,x11,
 ABBREVIATION= VEC /show,,,1,
 ABBREVIATION= RAS /show,,,0,
 ABBREVIATION= ON /menu,on,
 ABBREVIATION= OFF /menu,off,
 ABBREVIATION= NVP /config,nvpag,512,
 ABBREVIATION= QUIT /exit,nosav,
 XYZ TRIAD DISPLAY SET TO OFF

VIEW CONE ANGLE FOR WINDOW 1 25.00

END start.ans

To start ANSYS menu:

type: x3d for console
 x11 for X-term

type: on

```

*****
*****
ANSYS REVISION 5.0A 6/16/1995
2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
*****
*
* File name: ucf44x.inp
* 44 BWR UCF with High T.L. Disposal Container
* Helium Fill Gas
*
* Material Property file: props01.dat
*
* SNF Conductivity file: pwr15e.parm (Check for Changes)
* GE-7 8x8 SNF BWR Assembly (Assumed Conservative)
*
* SNF Heat Loads file: bwr1049.dat
* SNF Type: 10 years old, 49000 MWd/MTU
*
* Surface Temp. file: c21x5a.parm
* 100 MTU/acre (24.7 kgU/m^2) AML (High Thermal Loading)
* 5.0 m Diameter Drift with Concrete Invert
* Drift spacing = 22.5 m
* WP c/c spacing = 16.164 m
*
*****

```

Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512

Work space must also be increased (-m 64)

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED

LENGTH = METERS(M)

MASS = KILOGRAMS(KG)

TIME = SECONDS(SEC)

TEMPERATURE = CENTIGRADE

CURRENT = AMPS

Read in average effective conductivities from SNF model

*** NOTE *** CP= .650 TIME= 13:27:49

Restore ANSYS parameters from file= pwr15e.parm.

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

*** NOTE *** CP= .860 TIME= 13:27:50

Restore ANSYS parameters from file= c21x5a.parm.

/INPUT FILE= c21x5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

Define UCF/waste package parameters:

(UCF dimensions converted from inches/cm/mm to meters were required)

MIRAD = inner radius of UCF He Backfill shell (m) (NOT

MWALL = UCF He Backfill shell thickness (m) (NOT
 DCRAD = disposal container outer radius (m)
 OWALL = outer barrier thickness (m)
 IWALL = inner barrier thickness (m)
 DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)
 GCORS = corner guide short side width (m)
 GWALL = basket guide thickness (m)
 GLEN1 = side guide 1/3 width (m) (NOT USED)
 GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)
 SWALL = stainless tube thickness (m)
 TWALL = Aluminum thermal shunt thickness (m)
 TWALL = Aluminum thermal shunt thickness (m)
 THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length
 PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0
 MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .8130000

PARAMETER OWALL = .1000000

PARAMETER IWALL = .2000000E-01

PARAMETER DCIRD = .6930000

PARAMETER GCORL = .3200000

PARAMETER GCORS = .1816000

PARAMETER GWALL = .9500000E-02

GLEN1=9.6170*2.54/100.0

GLENT=28.866*2.54/100.0

PARAMETER HCELL = .7650000E-01

PARAMETER SWALL = .3500000E-02

PARAMETER TWALL = .2000000E-01

PARAMETER THWLL = .1000000E-01

PARAMETER ACTVL = 3.810000

PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)

FUEL = volumetric heat production (W/m³) f(yrs)

FVOLU = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)

QCELL = 1/4 of basket cell opening (m)

SCELL = 1/2 of basket cell opening+SS wall(m)

ACELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c

GY## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)

MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)

DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.
DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVOLUME = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCELL = .8000000E-01
ACELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)
MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5748778

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
TM_START = start time (sec)
TMI* = time increment for solution (sec)
TME* = start and stop for time do-loops (sec)
TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760

PARAMETER TM10 = 3155760.

PARAMETER TM11 = .3155760E+08

PARAMETER TM110 = .3155760E+09

PARAMETER TM1100 = .3155760E+10

PARAMETER TM11000 = .3155760E+11

PARAMETER TME0 = .2840187E+08

PARAMETER TME1 = .3155763E+08

PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:27:51 JUN 16, 1995 CP= 1.830
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
 KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **

** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density: DENS (kg/m^3) **

** Emissivity EMIS **

** Conductivity: KXX (W/m/K) **

** Specific Heat: C (J/kg/K) **

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 NUM. POINTS= 1

SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1

SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1

SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1

SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1

SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1

SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1

SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1

SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 21.11000 37.78000 65.56000
93.33000 121.1100 148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 176.6700 204.4400 232.2200
260.0000 287.7800 315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 343.3300 371.1100 398.8900
426.6700 454.4400 482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 510.0000 537.7800 565.5600
593.3300 621.1100 648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***

SLOC= 25	676.6700 760.0000	704.4400 787.7800	732.2200 815.5600	
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6				
SLOC= 1	13.33000 15.06000	13.67000 15.58000	14.19000	14.54000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12				
SLOC= 7	15.92000 17.83000	16.44000 18.17000	16.96000	17.31000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18				
SLOC= 13	18.52000 20.25000	19.04000 20.77000	19.38000	19.90000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24				
SLOC= 19	21.11000 22.67000	21.46000 23.02000	21.98000	22.33000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30				
SLOC= 25	23.54000 24.92000	23.88000 25.27000	24.23000	24.58000
PROPERTY TABLE C MAT= 1 NUM. POINTS= 6				
SLOC= 1	481.6800 509.9800	486.9200 520.2900	498.0900	499.3800
PROPERTY TABLE C MAT= 1 NUM. POINTS= 12				
SLOC= 7	521.0700 543.0200	527.3800 543.3100	536.9200	537.3400
PROPERTY TABLE C MAT= 1 NUM. POINTS= 18				
SLOC= 13	546.9100 557.2500	552.1400 565.1100	552.2600	557.2200
PROPERTY TABLE C MAT= 1 NUM. POINTS= 24				
SLOC= 19	565.0100 574.9200	564.9100 574.6800	572.3500	572.1400
PROPERTY TABLE C MAT= 1 NUM. POINTS= 30				
SLOC= 25	581.6400 585.9600	581.3000 588.3900	583.8600	586.3600
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6				
SLOC= 1	40.84000 42.23000	41.36000 42.23000	41.88000	42.23000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12				
SLOC= 7	42.06000 40.50000	41.88000 39.98000	41.36000	41.02000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 18				
SLOC= 13	39.29000 36.69000	38.77000 36.17000	38.08000	37.56000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 24				
SLOC= 19	35.48000 32.36000	34.61000 31.50000	33.92000	33.23000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 30				
SLOC= 25	30.29000 26.13000	28.90000 26.13000	27.35000	26.48000
PROPERTY TABLE C MAT= 3 NUM. POINTS= 6				
SLOC= 1	428.7200 486.0800	444.9500 495.6600	460.9400	476.8700
PROPERTY TABLE C MAT= 3 NUM. POINTS= 12				
SLOC= 7	506.0900 543.6300	517.0700 550.6200	525.6400	536.9900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 18
 SLOC= 13 562.2100 577.3200 589.1000 600.5700
 611.3500 629.0900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 24
 SLOC= 19 645.3200 665.1200 682.0700 694.5200
 724.0700 761.9500

PROPERTY TABLE C MAT= 3 NUM. POINTS= 30
 SLOC= 25 806.3100 888.6000 1095.040 1638.780
 808.6800 736.9000

Define K for material 2.

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 593.3300 621.1100 648.8900
 676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 27 ***
 SLOC= 25 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 6
 SLOC= 1 12.29000 12.63000 13.15000 13.67000
 14.02000 14.54000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 12
 SLOC= 7 14.88000 15.40000 15.75000 16.10000
 16.61000 16.96000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 18
 SLOC= 13 17.31000 17.65000 18.00000 18.52000
 18.86000 19.21000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200

510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
SLOC= 1 460.6900 477.4200 501.0200 504.6500
498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
SLOC= 7 536.8800 559.8500 576.8300 576.2100
581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
SLOC= 13 619.5800 636.7600 654.2000 678.2500
696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 .0000000E+00 10.00000 20.00000
30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 60.00000 70.00000 80.00000
90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 120.0000 130.0000 140.0000
150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 180.0000 190.0000 200.0000
210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
SLOC= 25 240.0000 250.0000 260.0000
270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
SLOC= 31 300.0000 310.0000 320.0000
330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
SLOC= 37 360.0000 370.0000 380.0000
390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
SLOC= 43 420.0000 430.0000 440.0000
450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
SLOC= 1 8.720000 8.540000 8.360000 8.190000
8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
SLOC= 7 7.720000 7.580000 7.440000 7.310000
7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
SLOC= 13 6.930000 6.820000 6.700000 6.600000
6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
SLOC= 19 6.290000 6.190000 6.100000 6.010000
5.920000 5.840000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 30
 SLOC= 25 5.760000 5.680000 5.600000 5.520000
 5.450000 5.380000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 36
 SLOC= 31 5.310000 5.240000 5.180000 5.110000
 5.050000 4.990000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 42
 SLOC= 37 4.930000 4.870000 4.810000 4.760000
 4.700000 4.650000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 48
 SLOC= 43 4.600000 4.550000 4.500000 4.450000
 4.400000 4.350000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 50
 SLOC= 48 4.310000 4.270000 4.220000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 6
 SLOC= 1 12.29000 12.44000 12.58000 12.72000
 12.87000 13.01000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 12
 SLOC= 7 13.15000 13.28000 13.42000 13.55000
 13.69000 13.82000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 18
 SLOC= 13 13.95000 14.08000 14.21000 14.34000
 14.46000 14.59000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 24
 SLOC= 19 14.72000 14.84000 14.96000 15.09000
 15.21000 15.33000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 30
 SLOC= 25 15.45000 15.57000 15.69000 15.81000
 15.93000 16.05000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 36
 SLOC= 31 16.17000 16.29000 16.40000 16.52000
 16.64000 16.76000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 42
 SLOC= 37 16.88000 16.99000 17.11000 17.23000
 17.35000 17.46000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 48
 SLOC= 43 17.58000 17.70000 17.82000 17.94000
 18.06000 18.18000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 50
 SLOC= 48 18.30000 18.42000 18.54000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 6
 SLOC= 1 1.940000 1.940000 1.940000 1.940000
 1.940000 1.940000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 12
 SLOC= 7 1.940000 1.950000 1.950000 1.950000
 1.950000 1.950000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 18
 SLOC= 13 1.950000 1.950000 1.960000 1.960000
 1.960000 1.960000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 24
 SLOC= 19 1.960000 1.970000 1.970000 1.970000
 1.970000 1.980000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
 SLOC= 25 1.980000 1.980000 1.980000 1.990000
 1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
 SLOC= 31 2.000000 2.000000 2.000000 2.010000
 2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
 SLOC= 37 2.020000 2.020000 2.020000 2.030000
 2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
 SLOC= 43 2.040000 2.040000 2.040000 2.050000
 2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
 SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 -13.15000 6.850000 26.85000
 76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 226.8500 276.8500 326.8500
 376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
 SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
 SLOC= 1 .1875000 .1750000 .1625000 .1422000
 .1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
 SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
 .6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
 SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 6
 SLOC= 1 .1370000 .1450000 .1520000 .1700000
 .1870000 .2040000

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 12
 SLOC= 7 .2200000 .2360000 .2520000 .2640000
 .2780000 .2910000

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 15
 SLOC= 13 .3040000 .3300000 .3540000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 6
 SLOC= 1 1.348000 1.254700 1.161400 .9950000
 .8711000 .7740000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 12
 SLOC= 7 .6964000 .6329000 .5804000 .5356000
 .4975000 .4643000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 15
 SLOC= 13 .4354000 .3868000 .3482000

PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 6
 SLOC= 1 .2300000E-01 .2500000E-01 .2600000E-01 .3000000E-01

```

        .3400000E-01 .3700000E-01
PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 12
SLOC= 7 .4100000E-01 .4400000E-01 .4700000E-01 .5000000E-01
        .5200000E-01 .5500000E-01

PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 15
SLOC= 13 .5700000E-01 .6200000E-01 .6700000E-01

PROPERTY TABLE C MAT= 8 NUM. POINTS= 6
SLOC= 1 1006.200 1006.600 1007.000 1009.000
        1014.000 1021.000

PROPERTY TABLE C MAT= 8 NUM. POINTS= 12
SLOC= 7 1030.000 1040.000 1051.000 1063.000
        1075.000 1087.000

PROPERTY TABLE C MAT= 8 NUM. POINTS= 15
SLOC= 13 1099.000 1121.000 1141.000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 6
SLOC= 1 1.303700 1.213500 1.123300 .9625000
        .8425000 .7485000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 12
SLOC= 7 .6739000 .6124000 .5615000 .5214000
        .4812000 .4512000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 15
SLOC= 13 .4211000 .3743000 .3368000

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 6
SLOC= 1 .2300000E-01 .2400000E-01 .2600000E-01 .2900000E-01
        .3300000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 12
SLOC= 7 .3900000E-01 .4200000E-01 .4500000E-01 .4700000E-01
        .5000000E-01 .5200000E-01

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 15
SLOC= 13 .5500000E-01 .6000000E-01 .6500000E-01

PROPERTY TABLE C MAT= 9 NUM. POINTS= 6
SLOC= 1 1041.800 1041.400 1041.000 1042.000
        1045.000 1050.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 12
SLOC= 7 1056.000 1065.000 1075.000 1086.500
        1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
        .2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
        .3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

```

Define K and C for material 12

TEMPERATURE TABLE ERASED

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500

326.8500 526.8500 726.8500

PROPERTY TABLE KXX MAT= 12 NUM. POINTS= 6
SLOC= 1 413.0000 401.0000 393.0000 379.0000
 366.0000 352.0000

PROPERTY TABLE C MAT= 12 NUM. POINTS= 6
SLOC= 1 356.0000 385.0000 397.0000 417.0000
 433.0000 451.0000

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***
SLOC= 1 23.00000 50.00000 100.0000
 150.0000 200.0000

PROPERTY TABLE KXX MAT= 13 NUM. POINTS= 5
SLOC= 1 182.5600 190.1700 199.2200 202.9100
 203.7200

PROPERTY TABLE C MAT= 13 NUM. POINTS= 5
SLOC= 1 868.0000 903.0000 946.0000 976.0000
 998.0000

** End of Material Property List **

Read in single assembly heat loads
Calculate the volumetric heat generation
(Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

** History of SNF Assembly Heat Generation Rates **

** Output of PHIA, SCSI: 800000000-01717-1200-3000X Rev.00B **

**

** Executable File Name: PHIA00B.EXE **

** Output File Name: bwr1049.dat **

** Execution Date: 03/07/95 **

** Start Age (years): 10.0 **

** Decay Period (years): 10000 **

** Enrichment (percent): 3.74 **

** Burnup (MWd/MTU): 49000 **

** Assembly Type: BWR **

** SNF U Mass (MTU/assy): 0.200 **

**

** ASSY(#,1) is the SNF assembly heat in Watts. **

** ASSY(#,0) is the time post emplacement in years. **

PARAMETER ASSY(1,1) = 409.4200 409.2500 409.0700 408.9000
 408.7300 408.5500

PARAMETER ASSY(7,1) = 408.3800 408.2000 408.0300 407.8600
 407.6800 406.8200

PARAMETER ASSY(13,1) = 405.9700 405.1200 404.2800 403.4400
 402.6100 401.7900

PARAMETER ASSY(19,1) = 400.9700 400.1500 399.3400 398.5400
 397.7400 396.9500

PARAMETER ASSY(25,1) = 396.1600 395.3800 394.6000 393.8300
 393.0600 386.0700

PARAMETER ASSY(31,1) = 379.4900 373.4300 367.7000 362.3600
 357.2900 352.6900

PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000
PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000	550.0000	600.0000	650.0000

	700.0000	750.0000		
PARAMETER ASSY(79,0) =	800.0000	850.0000	900.0000	950.0000
	1000.000	1500.000		
PARAMETER ASSY(85,0) =	2000.000	2500.000	3000.000	3500.000
	4000.000	4500.000		
PARAMETER ASSY(91,0) =	5000.000	5500.000	6000.000	6500.000
	7000.000	7500.000		
PARAMETER ASSY(97,0) =	8000.000	8500.000	9000.000	9500.000
	10000.00			

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)
 INPUT MATRIX= ASSY(1,0)
 INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS
 RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN
 FUEL(1) = COPY ASSY(1)
 SCALE FACTORS RESULT= 15.697 INPUT= 1.0000
 VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity

Density: DENS (kg/m³)

Conductivity: KXX (W/m/K)

Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
 SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
 SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
 SLOC= 1 274.0000

Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
 SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.000 BY 50.000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***

SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Construct geometry for Disposal Container

Define center and axis keypoints for waste package
Also, create placeholder keypoints and lines
(K's 1,2,3,4,5,6,7,8)
(L's 1,2,3,4)

KEYPOINT	1	X,Y,Z=	.000000E+00	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	2	X,Y,Z=	.000000E+00	.000000E+00	1.00000	IN CSYS= 0
KEYPOINT	3	X,Y,Z=	.000000E+00	.000000E+00	1.30000	IN CSYS= 0
KEYPOINT	4	X,Y,Z=	.000000E+00	.000000E+00	1.40000	IN CSYS= 0
KEYPOINT	5	X,Y,Z=	.000000E+00	.000000E+00	1.50000	IN CSYS= 0
KEYPOINT	6	X,Y,Z=	.000000E+00	.000000E+00	1.60000	IN CSYS= 0
KEYPOINT	7	X,Y,Z=	.000000E+00	.000000E+00	1.70000	IN CSYS= 0
KEYPOINT	8	X,Y,Z=	.000000E+00	.000000E+00	1.80000	IN CSYS= 0

LINE CONNECTS KEYPOINTS		3	4			
LINE NO.=	1	KP1=	3	TAN1=	.0000	.0000 -1.0000
		KP2=	4	TAN2=	.0000	.0000 1.0000

LINE CONNECTS KEYPOINTS		4	5			
LINE NO.=	2	KP1=	4	TAN1=	.0000	.0000 -1.0000
		KP2=	5	TAN2=	.0000	.0000 1.0000

LINE CONNECTS KEYPOINTS		5	6			
LINE NO.=	3	KP1=	5	TAN1=	.0000	.0000 -1.0000
		KP2=	6	TAN2=	.0000	.0000 1.0000

LINE CONNECTS KEYPOINTS		6	7			
LINE NO.=	4	KP1=	6	TAN1=	.0000	.0000 -1.0000
		KP2=	7	TAN2=	.0000	.0000 1.0000

Define disposal container outer radius and material interface
(K's 9,10,11,12,13,14)
(L's 5,6,7,8,9,10,11)
(A's 1,2)

KEYPOINT	9	X,Y,Z=	.000000E+00	.813000	.000000E+00	IN CSYS= 0
KEYPOINT	10	X,Y,Z=	.813000	.000000E+00	.000000E+00	IN CSYS= 0

KEYPOINT 11 X,Y,Z= .000000E+00 .813000 .000000E+00 IN CSYS= 0
 KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .81300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .81300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

 Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0

KEYPOINT	20	X,Y,Z=	.490025	.490025	.000000E+00	IN CSYS=	0
KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS=	0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS=	0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS=	0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS=	0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS=	0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS=	0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS=	0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS=	0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS=	0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS=	0

LINE CONNECTS KEYPOINTS 14 15
 LINE NO.= 12 KP1= 14 TAN1= .0000 1.0000 .0000
 KP2= 15 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 16 AND 15 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 13 KP1= 16 TAN1= .9999 -.0144 .0000
 KP2= 15 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 17 AND 16 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 14 KP1= 17 TAN1= .9694 -.2453 .0000
 KP2= 16 TAN2= -.9999 .0144 .0000

ARC BETWEEN KEYPOINTS 18 AND 17 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 15 KP1= 18 TAN1= .9659 -.2590 .0000
 KP2= 17 TAN2= -.9694 .2453 .0000

ARC BETWEEN KEYPOINTS 19 AND 18 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 16 KP1= 19 TAN1= .7208 -.6932 .0000
 KP2= 18 TAN2= -.9659 .2590 .0000

ARC BETWEEN KEYPOINTS 20 AND 19 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 17 KP1= 20 TAN1= .7071 -.7071 .0000
 KP2= 19 TAN2= -.7208 .6932 .0000

ARC BETWEEN KEYPOINTS 21 AND 20 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 18 KP1= 21 TAN1= .6932 -.7208 .0000
 KP2= 20 TAN2= -.7071 .7071 .0000

ARC BETWEEN KEYPOINTS 22 AND 21 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 19 KP1= 22 TAN1= .2590 -.9659 .0000
 KP2= 21 TAN2= -.6932 .7208 .0000

ARC BETWEEN KEYPOINTS 23 AND 22 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 20 KP1= 23 TAN1= .2453 -.9694 .0000
 KP2= 22 TAN2= -.2590 .9659 .0000

ARC BETWEEN KEYPOINTS 24 AND 23 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 21 KP1= 24 TAN1= .0144 -.9999 .0000
 KP2= 23 TAN2= -.2453 .9694 .0000

ARC BETWEEN KEYPOINTS 25 AND 24 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 22 KP1= 25 TAN1= .0000 -1.0000 .0000
 KP2= 24 TAN2= -.0144 .9999 .0000

ARC BETWEEN KEYPOINTS 26 AND 25 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 23 KP1= 26 TAN1= -.0144 -.9999 .0000
 KP2= 25 TAN2= .0000 1.0000 .0000

ARC BETWEEN KEYPOINTS 27 AND 26 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 24 KP1= 27 TAN1= -.2453 -.9694 .0000
 KP2= 26 TAN2= .0144 .9999 .0000

ARC BETWEEN KEYPOINTS 28 AND 27 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 25 KP1= 28 TAN1= -.2590 -.9659 .0000
 KP2= 27 TAN2= .2453 .9694 .0000

ARC BETWEEN KEYPOINTS 29 AND 28 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 26 KP1= 29 TAN1= -.6932 -.7208 .0000
 KP2= 28 TAN2= .2590 .9659 .0000

ARC BETWEEN KEYPOINTS 30 AND 29 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 27 KP1= 30 TAN1= -.7071 -.7071 .0000
 KP2= 29 TAN2= .6932 .7208 .0000

ARC BETWEEN KEYPOINTS 31 AND 30 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 28 KP1= 31 TAN1= -.7208 -.6932 .0000
 KP2= 30 TAN2= .7071 .7071 .0000

ARC BETWEEN KEYPOINTS 32 AND 31 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 29 KP1= 32 TAN1= -.9659 -.2590 .0000
 KP2= 31 TAN2= .7208 .6932 .0000

ARC BETWEEN KEYPOINTS 33 AND 32 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 30 KP1= 33 TAN1= -.9694 -.2453 .0000
 KP2= 32 TAN2= .9659 .2590 .0000

ARC BETWEEN KEYPOINTS 34 AND 33 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 31 KP1= 34 TAN1= -.9999 -.0144 .0000
 KP2= 33 TAN2= .9694 .2453 .0000

ARC BETWEEN KEYPOINTS 35 AND 34 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 32 KP1= 35 TAN1= -1.0000 .0000 .0000
 KP2= 34 TAN2= .9999 .0144 .0000

LINE CONNECTS KEYPOINTS 12 35
 LINE NO.= 33 KP1= 12 TAN1= .0000 -1.0000 .0000
 KP2= 35 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 25 13
 LINE NO.= 34 KP1= 25 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
 LINE LIST = ALL SELECTED LINES
 (TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
 LINE LIST = ALL SELECTED LINES
 (TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
 (51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
 (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
 (50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
 (67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
 (84,85,86,87,88,89,90,91,92)
 (A's 5 - 26)

horizontal thermal shunt

KEYPOINT 36 X,Y,Z= .000000E+00 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 37 X,Y,Z= .000000E+00 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 38 X,Y,Z= .100000E-01 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 39 X,Y,Z= .100000E-01 .000000E+00 .000000E+00 IN CSYS= 0

KEYPOINT	40	X,Y,Z=	.100000E-01	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS= 0

vertical thermal shunt

KEYPOINT	53	X,Y,Z=	.000000E+00	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS= 0

Lines; shunt widths, horizontal then vertical: (35-57)

LINE CONNECTS KEYPOINTS	36	1			
LINE NO.=	35	KP1=	36	TAN1=	.0000 -1.0000 .0000
		KP2=	1	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	1	37			
LINE NO.=	36	KP1=	1	TAN1=	.0000 -1.0000 .0000
		KP2=	37	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	38	39			
LINE NO.=	37	KP1=	38	TAN1=	.0000 -1.0000 .0000

	KP2=	39	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		39	40			
LINE NO.=	38	KP1=	39	TAN1=	.0000	-1.0000
		KP2=	40	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		41	42			
LINE NO.=	39	KP1=	41	TAN1=	.0000	-1.0000
		KP2=	42	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		42	43			
LINE NO.=	40	KP1=	42	TAN1=	.0000	-1.0000
		KP2=	43	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		44	45			
LINE NO.=	41	KP1=	44	TAN1=	.0000	-1.0000
		KP2=	45	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		45	46			
LINE NO.=	42	KP1=	45	TAN1=	.0000	-1.0000
		KP2=	46	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		47	48			
LINE NO.=	43	KP1=	47	TAN1=	.0000	-1.0000
		KP2=	48	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		48	49			
LINE NO.=	44	KP1=	48	TAN1=	.0000	-1.0000
		KP2=	49	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		50	51			
LINE NO.=	45	KP1=	50	TAN1=	.0000	-1.0000
		KP2=	51	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		51	52			
LINE NO.=	46	KP1=	51	TAN1=	.0000	-1.0000
		KP2=	52	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		53	54			
LINE NO.=	47	KP1=	53	TAN1=	-1.0000	.0000
		KP2=	54	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		55	56			
LINE NO.=	48	KP1=	55	TAN1=	-1.0000	.0000
		KP2=	56	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		57	58			
LINE NO.=	49	KP1=	57	TAN1=	-1.0000	.0000
		KP2=	58	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		59	60			
LINE NO.=	50	KP1=	59	TAN1=	-1.0000	.0000
		KP2=	60	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		37	40			
LINE NO.=	51	KP1=	37	TAN1=	-1.0000	.0000
		KP2=	40	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		1	39			
LINE NO.=	52	KP1=	1	TAN1=	-1.0000	.0000
		KP2=	39	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		36	38			
LINE NO.=	53	KP1=	36	TAN1=	-1.0000	.0000
		KP2=	38	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		61	62			
LINE NO.=	54	KP1=	61	TAN1=	-1.0000	.0000
		KP2=	62	TAN2=	1.0000	.0000

LINE CONNECTS KEYPOINTS 63 64
 LINE NO.= 55 KP1= 63 TAN1= -1.0000 .0000 .0000
 KP2= 64 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 65 66
 LINE NO.= 56 KP1= 65 TAN1= -1.0000 .0000 .0000
 KP2= 66 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 67 68
 LINE NO.= 57 KP1= 67 TAN1= -1.0000 .0000 .0000
 KP2= 68 TAN2= 1.0000 .0000 .0000

Lines; shunt edges, horizontal then vertical: (58-92)

LINE CONNECTS KEYPOINTS 38 41
 LINE NO.= 58 KP1= 38 TAN1= -1.0000 .0000 .0000
 KP2= 41 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 39 42
 LINE NO.= 59 KP1= 39 TAN1= -1.0000 .0000 .0000
 KP2= 42 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 40 43
 LINE NO.= 60 KP1= 40 TAN1= -1.0000 .0000 .0000
 KP2= 43 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 41 44
 LINE NO.= 61 KP1= 41 TAN1= -1.0000 .0000 .0000
 KP2= 44 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 42 45
 LINE NO.= 62 KP1= 42 TAN1= -1.0000 .0000 .0000
 KP2= 45 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 43 46
 LINE NO.= 63 KP1= 43 TAN1= -1.0000 .0000 .0000
 KP2= 46 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 44 47
 LINE NO.= 64 KP1= 44 TAN1= -1.0000 .0000 .0000
 KP2= 47 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 45 48
 LINE NO.= 65 KP1= 45 TAN1= -1.0000 .0000 .0000
 KP2= 48 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 46 49
 LINE NO.= 66 KP1= 46 TAN1= -1.0000 .0000 .0000
 KP2= 49 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 47 50
 LINE NO.= 67 KP1= 47 TAN1= -1.0000 .0000 .0000
 KP2= 50 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 48 51
 LINE NO.= 68 KP1= 48 TAN1= -1.0000 .0000 .0000
 KP2= 51 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 49 52
 LINE NO.= 69 KP1= 49 TAN1= -1.0000 .0000 .0000
 KP2= 52 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 26 50
 LINE NO.= 70 KP1= 26 TAN1= 1.0000 .0000 .0000
 KP2= 50 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 25 51
 LINE NO.= 71 KP1= 25 TAN1= 1.0000 .0000 .0000
 KP2= 51 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 52 24

LINE NO.=	72	KP1=	52	TAN1=	-1.0000	.0000	.0000
		KP2=	24	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS			15	53			
LINE NO.=	73	KP1=	15	TAN1=	.0000	1.0000	.0000
		KP2=	53	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			16	54			
LINE NO.=	74	KP1=	16	TAN1=	.0000	1.0000	.0000
		KP2=	54	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			53	55			
LINE NO.=	75	KP1=	53	TAN1=	.0000	1.0000	.0000
		KP2=	55	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			54	56			
LINE NO.=	76	KP1=	54	TAN1=	.0000	1.0000	.0000
		KP2=	56	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			55	57			
LINE NO.=	77	KP1=	55	TAN1=	.0000	1.0000	.0000
		KP2=	57	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			56	58			
LINE NO.=	78	KP1=	56	TAN1=	.0000	1.0000	.0000
		KP2=	58	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			57	59			
LINE NO.=	79	KP1=	57	TAN1=	.0000	1.0000	.0000
		KP2=	59	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			58	60			
LINE NO.=	80	KP1=	58	TAN1=	.0000	1.0000	.0000
		KP2=	60	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			59	37			
LINE NO.=	81	KP1=	59	TAN1=	.0000	1.0000	.0000
		KP2=	37	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			60	40			
LINE NO.=	82	KP1=	60	TAN1=	.0000	1.0000	.0000
		KP2=	40	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			36	61			
LINE NO.=	83	KP1=	36	TAN1=	.0000	1.0000	.0000
		KP2=	61	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			38	62			
LINE NO.=	84	KP1=	38	TAN1=	.0000	1.0000	.0000
		KP2=	62	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			61	63			
LINE NO.=	85	KP1=	61	TAN1=	.0000	1.0000	.0000
		KP2=	63	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			62	64			
LINE NO.=	86	KP1=	62	TAN1=	.0000	1.0000	.0000
		KP2=	64	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			63	65			
LINE NO.=	87	KP1=	63	TAN1=	.0000	1.0000	.0000
		KP2=	65	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			64	66			
LINE NO.=	88	KP1=	64	TAN1=	.0000	1.0000	.0000
		KP2=	66	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS			65	67			
LINE NO.=	89	KP1=	65	TAN1=	.0000	1.0000	.0000
		KP2=	67	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS 66 68
 LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
 KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
 LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
 KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
 LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
 KP2= 34 TAN2= .0000 -1.0000 .0000

define areas for thermal shunts

DEFINE AREA BY LIST OF LINES
 LINE LIST = 35 53 37 52
 (TRAVERSED IN SAME DIRECTION AS LINE 35)

AREA NUMBER = 5

DEFINE AREA BY LIST OF LINES
 LINE LIST = 36 52 38 51
 (TRAVERSED IN SAME DIRECTION AS LINE 36)

AREA NUMBER = 6

DEFINE AREA BY LIST OF LINES
 LINE LIST = 37 58 39 59
 (TRAVERSED IN SAME DIRECTION AS LINE 37)

AREA NUMBER = 7

DEFINE AREA BY LIST OF LINES
 LINE LIST = 38 59 40 60
 (TRAVERSED IN SAME DIRECTION AS LINE 38)

AREA NUMBER = 8

DEFINE AREA BY LIST OF LINES
 LINE LIST = 39 61 41 62
 (TRAVERSED IN SAME DIRECTION AS LINE 39)

AREA NUMBER = 9

DEFINE AREA BY LIST OF LINES
 LINE LIST = 40 62 42 63
 (TRAVERSED IN SAME DIRECTION AS LINE 40)

AREA NUMBER = 10

DEFINE AREA BY LIST OF LINES
 LINE LIST = 41 64 43 65
 (TRAVERSED IN SAME DIRECTION AS LINE 41)

AREA NUMBER = 11

DEFINE AREA BY LIST OF LINES
 LINE LIST = 42 65 44 66
 (TRAVERSED IN SAME DIRECTION AS LINE 42)

AREA NUMBER = 12

DEFINE AREA BY LIST OF LINES
 LINE LIST = 43 67 45 68
 (TRAVERSED IN SAME DIRECTION AS LINE 43)

AREA NUMBER = 13

DEFINE AREA BY LIST OF LINES
 LINE LIST = 44 68 46 69

```
(TRAVERSED IN SAME DIRECTION AS LINE 44)
AREA NUMBER = 14
DEFINE AREA BY LIST OF LINES
LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)
AREA NUMBER = 15
DEFINE AREA BY LIST OF LINES
LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)
AREA NUMBER = 16
DEFINE AREA BY LIST OF LINES
LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)
AREA NUMBER = 17
DEFINE AREA BY LIST OF LINES
LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)
AREA NUMBER = 18
DEFINE AREA BY LIST OF LINES
LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)
AREA NUMBER = 19
DEFINE AREA BY LIST OF LINES
LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)
AREA NUMBER = 20
DEFINE AREA BY LIST OF LINES
LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)
AREA NUMBER = 21
DEFINE AREA BY LIST OF LINES
LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)
AREA NUMBER = 22
DEFINE AREA BY LIST OF LINES
LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)
AREA NUMBER = 23
DEFINE AREA BY LIST OF LINES
LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)
AREA NUMBER = 24
DEFINE AREA BY LIST OF LINES
LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)
AREA NUMBER = 25
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DEFINE AREA BY LIST OF LINES

LINE LIST = 91 32 92 57
(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
bottom guide						
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS 69 17

LINE NO.= 93 KP1= 69 TAN1= .0000 -1.0000 .0000
KP2= 17 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 18 70

LINE NO.= 94 KP1= 18 TAN1= .0000 1.0000 .0000

	KP2=	70	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		71	69			
LINE NO.= 95	KP1=	71	TAN1=	.0000	-1.0000	.0000
	KP2=	69	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		70	72			
LINE NO.= 96	KP1=	70	TAN1=	.0000	1.0000	.0000
	KP2=	72	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		73	71			
LINE NO.= 97	KP1=	73	TAN1=	1.0000	.0000	.0000
	KP2=	71	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		72	74			
LINE NO.= 98	KP1=	72	TAN1=	-1.0000	.0000	.0000
	KP2=	74	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		20	73			
LINE NO.= 99	KP1=	20	TAN1=	1.0000	.0002	.0000
	KP2=	73	TAN2=	-1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS		74	19			
LINE NO.= 100	KP1=	74	TAN1=	-1.0000	.0000	.0000
	KP2=	19	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		75	20			
LINE NO.= 101	KP1=	75	TAN1=	-.0002	-1.0000	.0000
	KP2=	20	TAN2=	.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS		21	76			
LINE NO.= 102	KP1=	21	TAN1=	.0000	1.0000	.0000
	KP2=	76	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		77	75			
LINE NO.= 103	KP1=	77	TAN1=	.0000	-1.0000	.0000
	KP2=	75	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		76	78			
LINE NO.= 104	KP1=	76	TAN1=	.0000	1.0000	.0000
	KP2=	78	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		79	77			
LINE NO.= 105	KP1=	79	TAN1=	1.0000	.0000	.0000
	KP2=	77	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		78	80			
LINE NO.= 106	KP1=	78	TAN1=	-1.0000	.0000	.0000
	KP2=	80	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		23	79			
LINE NO.= 107	KP1=	23	TAN1=	1.0000	.0000	.0000
	KP2=	79	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		80	22			
LINE NO.= 108	KP1=	80	TAN1=	-1.0000	.0000	.0000
	KP2=	22	TAN2=	1.0000	.0000	.0000
bottom guide						
LINE CONNECTS KEYPOINTS		81	27			
LINE NO.= 109	KP1=	81	TAN1=	-1.0000	.0000	.0000
	KP2=	27	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		28	82			
LINE NO.= 110	KP1=	28	TAN1=	1.0000	.0000	.0000
	KP2=	82	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		83	81			
LINE NO.= 111	KP1=	83	TAN1=	-1.0000	.0000	.0000
	KP2=	81	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	82	84			
LINE NO.= 112	KP1= 82	TAN1= 1.0000	.0000	.0000	
	KP2= 84	TAN2= -1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS	85	83			
LINE NO.= 113	KP1= 85	TAN1= .0000	-1.0000	.0000	
	KP2= 83	TAN2= .0000	1.0000	.0000	

LINE CONNECTS KEYPOINTS	84	86			
LINE NO.= 114	KP1= 84	TAN1= .0000	1.0000	.0000	
	KP2= 86	TAN2= .0000	-1.0000	.0000	

LINE CONNECTS KEYPOINTS	30	85			
LINE NO.= 115	KP1= 30	TAN1= .0002	-1.0000	.0000	
	KP2= 85	TAN2= -.0002	1.0000	.0000	

LINE CONNECTS KEYPOINTS	86	29			
LINE NO.= 116	KP1= 86	TAN1= .0000	1.0000	.0000	
	KP2= 29	TAN2= .0000	-1.0000	.0000	

LINE CONNECTS KEYPOINTS	87	30			
LINE NO.= 117	KP1= 87	TAN1= -1.0000	.0002	.0000	
	KP2= 30	TAN2= 1.0000	-.0002	.0000	

LINE CONNECTS KEYPOINTS	31	88			
LINE NO.= 118	KP1= 31	TAN1= 1.0000	.0000	.0000	
	KP2= 88	TAN2= -1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS	89	87			
LINE NO.= 119	KP1= 89	TAN1= -1.0000	.0000	.0000	
	KP2= 87	TAN2= 1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS	88	90			
LINE NO.= 120	KP1= 88	TAN1= 1.0000	.0000	.0000	
	KP2= 90	TAN2= -1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS	91	89			
LINE NO.= 121	KP1= 91	TAN1= .0000	-1.0000	.0000	
	KP2= 89	TAN2= .0000	1.0000	.0000	

LINE CONNECTS KEYPOINTS	90	92			
LINE NO.= 122	KP1= 90	TAN1= .0000	1.0000	.0000	
	KP2= 92	TAN2= .0000	-1.0000	.0000	

LINE CONNECTS KEYPOINTS	33	91			
LINE NO.= 123	KP1= 33	TAN1= .0000	-1.0000	.0000	
	KP2= 91	TAN2= .0000	1.0000	.0000	

LINE CONNECTS KEYPOINTS	92	32			
LINE NO.= 124	KP1= 92	TAN1= .0000	1.0000	.0000	
	KP2= 32	TAN2= .0000	-1.0000	.0000	

Guide thickness lines

LINE CONNECTS KEYPOINTS	69	70			
LINE NO.= 125	KP1= 69	TAN1= -1.0000	.0000	.0000	
	KP2= 70	TAN2= 1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS	71	72			
LINE NO.= 126	KP1= 71	TAN1= -.7071	-.7071	.0000	
	KP2= 72	TAN2= .7071	.7071	.0000	

LINE CONNECTS KEYPOINTS	73	74			
LINE NO.= 127	KP1= 73	TAN1= .0000	-1.0000	.0000	
	KP2= 74	TAN2= .0000	1.0000	.0000	

LINE CONNECTS KEYPOINTS	75	76			
LINE NO.= 128	KP1= 75	TAN1= -1.0000	.0000	.0000	
	KP2= 76	TAN2= 1.0000	.0000	.0000	

LINE CONNECTS KEYPOINTS		77	78			
LINE NO.=	129	KP1=	77	TAN1=	-.7071	-.7071 .0000
		KP2=	78	TAN2=	.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		79	80			
LINE NO.=	130	KP1=	79	TAN1=	.0000	-1.0000 .0000
		KP2=	80	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		82	81			
LINE NO.=	131	KP1=	82	TAN1=	.0000	-1.0000 .0000
		KP2=	81	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		84	83			
LINE NO.=	132	KP1=	84	TAN1=	.7071	-.7071 .0000
		KP2=	83	TAN2=	-.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		86	85			
LINE NO.=	133	KP1=	86	TAN1=	1.0000	.0000 .0000
		KP2=	85	TAN2=	-1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		88	87			
LINE NO.=	134	KP1=	88	TAN1=	.0000	-1.0000 .0000
		KP2=	87	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		90	89			
LINE NO.=	135	KP1=	90	TAN1=	.7071	-.7071 .0000
		KP2=	89	TAN2=	-.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		92	91			
LINE NO.=	136	KP1=	92	TAN1=	1.0000	.0000 .0000
		KP2=	91	TAN2=	-1.0000	.0000 .0000

Guide steel

DEFINE AREA BY LIST OF LINES
 LINE LIST = 93 125 94 15
 (TRAVERSED IN SAME DIRECTION AS LINE 93)

AREA NUMBER = 27

DEFINE AREA BY LIST OF LINES
 LINE LIST = 95 126 96 125
 (TRAVERSED IN SAME DIRECTION AS LINE 95)

AREA NUMBER = 28

DEFINE AREA BY LIST OF LINES
 LINE LIST = 97 127 98 126
 (TRAVERSED IN SAME DIRECTION AS LINE 97)

AREA NUMBER = 29

DEFINE AREA BY LIST OF LINES
 LINE LIST = 99 17 100 127
 (TRAVERSED IN SAME DIRECTION AS LINE 99)

AREA NUMBER = 30

DEFINE AREA BY LIST OF LINES
 LINE LIST = 101 128 102 18
 (TRAVERSED IN SAME DIRECTION AS LINE 101)

AREA NUMBER = 31

DEFINE AREA BY LIST OF LINES
 LINE LIST = 103 129 104 128
 (TRAVERSED IN SAME DIRECTION AS LINE 103)

AREA NUMBER = 32

DEFINE AREA BY LIST OF LINES

LINE LIST = 105 130 106 129
(TRAVERSED IN SAME DIRECTION AS LINE 105)

AREA NUMBER = 33

DEFINE AREA BY LIST OF LINES
LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)

AREA NUMBER = 34

DEFINE AREA BY LIST OF LINES
LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)

AREA NUMBER = 35

DEFINE AREA BY LIST OF LINES
LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)

AREA NUMBER = 36

DEFINE AREA BY LIST OF LINES
LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)

AREA NUMBER = 37

DEFINE AREA BY LIST OF LINES
LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)

AREA NUMBER = 38

DEFINE AREA BY LIST OF LINES
LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)

AREA NUMBER = 39

DEFINE AREA BY LIST OF LINES
LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)

AREA NUMBER = 40

DEFINE AREA BY LIST OF LINES
LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)

AREA NUMBER = 41

DEFINE AREA BY LIST OF LINES
LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)

AREA NUMBER = 42
Guide gaps

DEFINE AREA BY LIST OF LINES
LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)

AREA NUMBER = 43

DEFINE AREA BY LIST OF LINES
LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)

AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 94 X,Y,Z= .100000E-01 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 95 X,Y,Z= .170000 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 96 X,Y,Z= .170000 .100000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 97 X,Y,Z= .135000E-01 .135000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 98 X,Y,Z= .135000E-01 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 99 X,Y,Z= .166500 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 100 X,Y,Z= .166500 .135000E-01 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 93 97
 LINE NO.= 141 KP1= 93 TAN1= -.7071 -.7071 .0000
 KP2= 97 TAN2= .7071 .7071 .0000

LINE CONNECTS KEYPOINTS 94 98
 LINE NO.= 142 KP1= 94 TAN1= -.7071 .7071 .0000
 KP2= 98 TAN2= .7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 100
 LINE NO.= 143 KP1= 96 TAN1= .7071 -.7071 .0000
 KP2= 100 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 95 99
 LINE NO.= 144 KP1= 95 TAN1= .7071 .7071 .0000
 KP2= 99 TAN2= -.7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 93
 LINE NO.= 145 KP1= 96 TAN1= 1.0000 .0000 .0000
 KP2= 93 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 100 97
 LINE NO.= 146 KP1= 100 TAN1= 1.0000 .0000 .0000
 KP2= 97 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 98 99
 LINE NO.= 147 KP1= 98 TAN1= -1.0000 .0000 .0000
 KP2= 99 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 94 95
 LINE NO.= 148 KP1= 94 TAN1= -1.0000 .0000 .0000
 KP2= 95 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 93 94
 LINE NO.= 149 KP1= 93 TAN1= .0000 -1.0000 .0000
 KP2= 94 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 97 98
 LINE NO.= 150 KP1= 97 TAN1= .0000 -1.0000 .0000
 KP2= 98 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 99 100
 LINE NO.= 151 KP1= 99 TAN1= .0000 1.0000 .0000
 KP2= 100 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 95 96
 LINE NO.= 152 KP1= 95 TAN1= .0000 1.0000 .0000
 KP2= 96 TAN2= .0000 -1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES
 LINE LIST = 152 144 151 143
 (TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES
 LINE LIST = 148 142 147 144
 (TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES
 LINE LIST = 150 146 151 147
 (TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55

Set element shapes and sizes for tubes
 8x8 mesh in fuel with 2
 divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
 PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
 first fuel, then stainless tubes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
 MAXIMUM NODE NUMBER = 81
 MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
 MAXIMUM NODE NUMBER = 145
 MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
 (A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290
 MAXIMUM ELEMENT NUMBER = 256
 (A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 435
 MAXIMUM ELEMENT NUMBER = 384
 (A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580
 MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725
 MAXIMUM ELEMENT NUMBER = 640
 (A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870
 MAXIMUM ELEMENT NUMBER = 768
 (A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015
 MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160
 MAXIMUM ELEMENT NUMBER = 1024
 (A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305
 MAXIMUM ELEMENT NUMBER = 1152
 (A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
 MAXIMUM ELEMENT NUMBER = 1280
 (A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
 MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
 MAXIMUM ELEMENT NUMBER = 1536
 (A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
 MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
 MAXIMUM ELEMENT NUMBER = 1792
 (A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
 MAXIMUM ELEMENT NUMBER = 1920
 (A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
 MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
 MAXIMUM ELEMENT NUMBER = 2176

(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
 MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
 MAXIMUM ELEMENT NUMBER = 2432

(A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
 MAXIMUM ELEMENT NUMBER = 2560

(A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
 MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 66 TO 70 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
 MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
 Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.420 TIME= 13:28:06
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.470 TIME= 13:28:06
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.730 TIME= 13:28:06
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.770 TIME= 13:28:06
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS 5 TO 26 IN STEPS OF 1

NUMBER OF AREAS MESHED = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	

NODE	875	USED FOR NODES	3741
NODE	874	USED FOR NODES	3742
NODE	873	USED FOR NODES	3743
NODE	1195	USED FOR NODES	1381
NODE	1050	USED FOR NODES	1236
NODE	801	USED FOR NODES	905
NODE	107	USED FOR NODES	3565
NODE	1091	USED FOR NODES	3550
NODE	132	USED FOR NODES	615
NODE	1340	USED FOR NODES	1526
NODE	656	USED FOR NODES	760
NODE	1194	USED FOR NODES	1382
NODE	802	USED FOR NODES	904
NODE	1049	USED FOR NODES	1237
NODE	106	USED FOR NODES	3566
NODE	133	USED FOR NODES	614
NODE	1092	USED FOR NODES	3551
NODE	1339	USED FOR NODES	1527
NODE	657	USED FOR NODES	759
NODE	1048	USED FOR NODES	1238
NODE	134	USED FOR NODES	613
NODE	803	USED FOR NODES	903
NODE	105	USED FOR NODES	3567
NODE	1093	USED FOR NODES	3552
NODE	1193	USED FOR NODES	1383
NODE	658	USED FOR NODES	758
NODE	1338	USED FOR NODES	1528
NODE	104	USED FOR NODES	3568
NODE	1192	USED FOR NODES	1384
NODE	804	USED FOR NODES	902
NODE	135	USED FOR NODES	612
NODE	1047	USED FOR NODES	1239
NODE	1094	USED FOR NODES	3553
NODE	1337	USED FOR NODES	1529
NODE	659	USED FOR NODES	757
NODE	660	USED FOR NODES	756
NODE	1191	USED FOR NODES	1385
NODE	103	USED FOR NODES	3569
NODE	805	USED FOR NODES	901
NODE	1095	USED FOR NODES	3554
NODE	136	USED FOR NODES	611
NODE	1336	USED FOR NODES	1530
NODE	1046	USED FOR NODES	1240
NODE	661	USED FOR NODES	755
NODE	1096	USED FOR NODES	3555
NODE	1190	USED FOR NODES	1386
NODE	102	USED FOR NODES	3570
NODE	806	USED FOR NODES	900
NODE	137	USED FOR NODES	610
NODE	1335	USED FOR NODES	1531
NODE	1045	USED FOR NODES	1241
NODE	662	USED FOR NODES	754
NODE	1097	USED FOR NODES	3556
NODE	138	USED FOR NODES	609
NODE	1044	USED FOR NODES	1242
NODE	1189	USED FOR NODES	1387
NODE	807	USED FOR NODES	899
NODE	101	USED FOR NODES	3571
NODE	1334	USED FOR NODES	1532
NODE	780	USED FOR NODES	1747
NODE	120	USED FOR NODES	151
NODE	119	USED FOR NODES	152
NODE	118	USED FOR NODES	153
NODE	117	USED FOR NODES	154
NODE	923	USED FOR NODES	3210
NODE	1503	USED FOR NODES	3499
NODE	1504	USED FOR NODES	3498
NODE	777	USED FOR NODES	898 1742 3203
NODE	1188	USED FOR NODES	1357 2031 2177
NODE	1358	USED FOR NODES	2184

NODE	1359	USED FOR NODES	2183		
NODE	1360	USED FOR NODES	2182		
NODE	1361	USED FOR NODES	2181		
NODE	1362	USED FOR NODES	2180		
NODE	1363	USED FOR NODES	2179		
NODE	1364	USED FOR NODES	2178		
NODE	778	USED FOR NODES	1749		
NODE	779	USED FOR NODES	1748		
NODE	1505	USED FOR NODES	3497		
NODE	1506	USED FOR NODES	3496		
NODE	1043	USED FOR NODES	1212	1886	2032
NODE	1213	USED FOR NODES	2039		
NODE	781	USED FOR NODES	1746		
NODE	782	USED FOR NODES	1745		
NODE	783	USED FOR NODES	1744		
NODE	784	USED FOR NODES	1743		
NODE	1214	USED FOR NODES	2038		
NODE	1215	USED FOR NODES	2037		
NODE	1507	USED FOR NODES	3495		
NODE	1508	USED FOR NODES	3494		
NODE	1509	USED FOR NODES	3493		
NODE	1216	USED FOR NODES	2036		
NODE	1217	USED FOR NODES	2035		
NODE	1218	USED FOR NODES	2034		
NODE	635	USED FOR NODES	1602		
NODE	1219	USED FOR NODES	2033		
NODE	1074	USED FOR NODES	1888		
NODE	636	USED FOR NODES	1601		
NODE	637	USED FOR NODES	1600		
NODE	929	USED FOR NODES	3204		
NODE	638	USED FOR NODES	1599		
NODE	100	USED FOR NODES	146	3564	
NODE	639	USED FOR NODES	1598		
NODE	928	USED FOR NODES	3205		
NODE	1333	USED FOR NODES	1502	2176	3468
NODE	1478	USED FOR NODES	3492		
NODE	1067	USED FOR NODES	1887	3548	
NODE	116	USED FOR NODES	147	608	1596
NODE	922	USED FOR NODES	3191		
NODE	924	USED FOR NODES	3209		
NODE	925	USED FOR NODES	3208		
NODE	926	USED FOR NODES	3207		
NODE	927	USED FOR NODES	3206		
NODE	121	USED FOR NODES	150		
NODE	122	USED FOR NODES	149		
NODE	123	USED FOR NODES	148		
NODE	632	USED FOR NODES	753	1597	1741
NODE	1073	USED FOR NODES	1889		
NODE	1072	USED FOR NODES	1890		
NODE	1071	USED FOR NODES	1891		
NODE	1070	USED FOR NODES	1892		
NODE	1069	USED FOR NODES	1893		
NODE	1068	USED FOR NODES	1894		
NODE	634	USED FOR NODES	1603		
NODE	633	USED FOR NODES	1604		
NODE	1961	USED FOR NODES	3590		
NODE	1920	USED FOR NODES	2106		
NODE	1671	USED FOR NODES	1775		
NODE	180	USED FOR NODES	3605		
NODE	2210	USED FOR NODES	3469		
NODE	1816	USED FOR NODES	3234		
NODE	2065	USED FOR NODES	2251		
NODE	221	USED FOR NODES	1630		
NODE	1962	USED FOR NODES	3591		
NODE	179	USED FOR NODES	3606		
NODE	1919	USED FOR NODES	2107		
NODE	2209	USED FOR NODES	3470		
NODE	2064	USED FOR NODES	2252		
NODE	1672	USED FOR NODES	1774		
NODE	222	USED FOR NODES	1629		

NODE	1817	USED FOR NODES	3233		
NODE	1673	USED FOR NODES	1773		
NODE	178	USED FOR NODES	3607		
NODE	223	USED FOR NODES	1628		
NODE	1963	USED FOR NODES	3592		
NODE	1818	USED FOR NODES	3232		
NODE	1918	USED FOR NODES	2108		
NODE	2208	USED FOR NODES	3471		
NODE	2063	USED FOR NODES	2253		
NODE	1917	USED FOR NODES	2109		
NODE	177	USED FOR NODES	3608		
NODE	2207	USED FOR NODES	3472		
NODE	224	USED FOR NODES	1627		
NODE	1674	USED FOR NODES	1772		
NODE	1964	USED FOR NODES	3593		
NODE	1819	USED FOR NODES	3231		
NODE	2062	USED FOR NODES	2254		
NODE	1916	USED FOR NODES	2110		
NODE	176	USED FOR NODES	3609		
NODE	2206	USED FOR NODES	3473		
NODE	2061	USED FOR NODES	2255		
NODE	225	USED FOR NODES	1626		
NODE	1965	USED FOR NODES	3594		
NODE	1675	USED FOR NODES	1771		
NODE	1820	USED FOR NODES	3230		
NODE	1966	USED FOR NODES	3595		
NODE	175	USED FOR NODES	3610		
NODE	1821	USED FOR NODES	3229		
NODE	2205	USED FOR NODES	3474		
NODE	1915	USED FOR NODES	2111		
NODE	226	USED FOR NODES	1625		
NODE	1676	USED FOR NODES	1770		
NODE	2060	USED FOR NODES	2256		
NODE	1822	USED FOR NODES	3228		
NODE	174	USED FOR NODES	3611		
NODE	1967	USED FOR NODES	3596		
NODE	2204	USED FOR NODES	3475		
NODE	1914	USED FOR NODES	2112		
NODE	227	USED FOR NODES	1624		
NODE	2059	USED FOR NODES	2257		
NODE	1677	USED FOR NODES	1769		
NODE	199	USED FOR NODES	298		
NODE	198	USED FOR NODES	299		
NODE	1792	USED FOR NODES	2467	3227	
NODE	1793	USED FOR NODES	2474		
NODE	1939	USED FOR NODES	2618		
NODE	1938	USED FOR NODES	2619		
NODE	1794	USED FOR NODES	2473		
NODE	1913	USED FOR NODES	2082	2611	2757
NODE	1795	USED FOR NODES	2472		
NODE	1796	USED FOR NODES	2471		
NODE	1797	USED FOR NODES	2470		
NODE	1798	USED FOR NODES	2469		
NODE	1799	USED FOR NODES	2468		
NODE	2203	USED FOR NODES	2901	3442	
NODE	2058	USED FOR NODES	2227	2756	2902
NODE	2234	USED FOR NODES	2903		
NODE	173	USED FOR NODES	291	3604	
NODE	2083	USED FOR NODES	2764		
NODE	2233	USED FOR NODES	2904		
NODE	2232	USED FOR NODES	2905		
NODE	2231	USED FOR NODES	2906		
NODE	2230	USED FOR NODES	2907		
NODE	2229	USED FOR NODES	2908		
NODE	2084	USED FOR NODES	2763		
NODE	1937	USED FOR NODES	2612	3588	
NODE	2228	USED FOR NODES	2909		
NODE	1940	USED FOR NODES	2617		
NODE	1941	USED FOR NODES	2616		
NODE	1942	USED FOR NODES	2615		

NODE	2085	USED FOR NODES	2762		
NODE	1943	USED FOR NODES	2614		
NODE	2086	USED FOR NODES	2761		
NODE	1944	USED FOR NODES	2613		
NODE	2087	USED FOR NODES	2760		
NODE	197	USED FOR NODES	292	1623	2321
NODE	2088	USED FOR NODES	2759		
NODE	200	USED FOR NODES	297		
NODE	201	USED FOR NODES	296		
NODE	202	USED FOR NODES	295		
NODE	203	USED FOR NODES	294		
NODE	1647	USED FOR NODES	1768	2322	2466
NODE	1648	USED FOR NODES	2329		
NODE	1649	USED FOR NODES	2328		
NODE	204	USED FOR NODES	293		
NODE	1654	USED FOR NODES	2323		
NODE	1653	USED FOR NODES	2324		
NODE	1652	USED FOR NODES	2325		
NODE	1651	USED FOR NODES	2326		
NODE	2089	USED FOR NODES	2758		
NODE	1650	USED FOR NODES	2327		
NODE	325	USED FOR NODES	3645		
NODE	2686	USED FOR NODES	3630		
NODE	2790	USED FOR NODES	2976		
NODE	2541	USED FOR NODES	3258		
NODE	366	USED FOR NODES	2355		
NODE	2396	USED FOR NODES	2500		
NODE	2935	USED FOR NODES	3443		
NODE	2645	USED FOR NODES	2831		
NODE	2789	USED FOR NODES	2977		
NODE	324	USED FOR NODES	3646		
NODE	2542	USED FOR NODES	3257		
NODE	367	USED FOR NODES	2354		
NODE	2644	USED FOR NODES	2832		
NODE	2397	USED FOR NODES	2499		
NODE	2934	USED FOR NODES	3444		
NODE	2687	USED FOR NODES	3631		
NODE	323	USED FOR NODES	3647		
NODE	2398	USED FOR NODES	2498		
NODE	2643	USED FOR NODES	2833		
NODE	2688	USED FOR NODES	3632		
NODE	2788	USED FOR NODES	2978		
NODE	2543	USED FOR NODES	3256		
NODE	368	USED FOR NODES	2353		
NODE	2933	USED FOR NODES	3445		
NODE	2642	USED FOR NODES	2834		
NODE	322	USED FOR NODES	3648		
NODE	2787	USED FOR NODES	2979		
NODE	2399	USED FOR NODES	2497		
NODE	2544	USED FOR NODES	3255		
NODE	369	USED FOR NODES	2352		
NODE	2932	USED FOR NODES	3446		
NODE	2689	USED FOR NODES	3633		
NODE	2641	USED FOR NODES	2835		
NODE	321	USED FOR NODES	3649		
NODE	2786	USED FOR NODES	2980		
NODE	2400	USED FOR NODES	2496		
NODE	2931	USED FOR NODES	3447		
NODE	2545	USED FOR NODES	3254		
NODE	370	USED FOR NODES	2351		
NODE	2690	USED FOR NODES	3634		
NODE	320	USED FOR NODES	3650		
NODE	2785	USED FOR NODES	2981		
NODE	2401	USED FOR NODES	2495		
NODE	2640	USED FOR NODES	2836		
NODE	2546	USED FOR NODES	3253		
NODE	371	USED FOR NODES	2350		
NODE	2930	USED FOR NODES	3448		
NODE	2691	USED FOR NODES	3635		
NODE	319	USED FOR NODES	3651		

NODE	2692	USED FOR NODES	3636		
NODE	372	USED FOR NODES	2349		
NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		

NODE 3077 USED FOR NODES 3374
 NODE 514 USED FOR NODES 3329
 NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.450 TIME= 13:28:10
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 16.180 TIME= 13:28:11
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 16.190 TIME= 13:28:11
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38	USED FOR KEYPOINT(S)	150	
KEYPOINT	40	USED FOR KEYPOINT(S)	93	
KEYPOINT	41	USED FOR KEYPOINT(S)	155	198
KEYPOINT	43	USED FOR KEYPOINT(S)	96	101
KEYPOINT	44	USED FOR KEYPOINT(S)	203	238
KEYPOINT	46	USED FOR KEYPOINT(S)	105	109
KEYPOINT	47	USED FOR KEYPOINT(S)	243	262
KEYPOINT	49	USED FOR KEYPOINT(S)	113	117
KEYPOINT	50	USED FOR KEYPOINT(S)	267	
KEYPOINT	52	USED FOR KEYPOINT(S)	121	
KEYPOINT	54	USED FOR KEYPOINT(S)	142	
KEYPOINT	56	USED FOR KEYPOINT(S)	134	141
KEYPOINT	58	USED FOR KEYPOINT(S)	126	133
KEYPOINT	60	USED FOR KEYPOINT(S)	94	125
KEYPOINT	62	USED FOR KEYPOINT(S)	149	158
KEYPOINT	64	USED FOR KEYPOINT(S)	157	166
KEYPOINT	66	USED FOR KEYPOINT(S)	165	174
KEYPOINT	68	USED FOR KEYPOINT(S)	173	
KEYPOINT	69	USED FOR KEYPOINT(S)	147	
KEYPOINT	71	USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73	USED FOR KEYPOINT(S)	195	230
KEYPOINT	75	USED FOR KEYPOINT(S)	227	233
KEYPOINT	77	USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79	USED FOR KEYPOINT(S)	123	
KEYPOINT	81	USED FOR KEYPOINT(S)	265	
KEYPOINT	83	USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85	USED FOR KEYPOINT(S)	249	259
KEYPOINT	87	USED FOR KEYPOINT(S)	217	253
KEYPOINT	89	USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91	USED FOR KEYPOINT(S)	177	
KEYPOINT	95	USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107	USED FOR KEYPOINT(S)	110	185 221

KEYPOINT	131 USED FOR KEYPOINT(S)	137	182	189
KEYPOINT	153 USED FOR KEYPOINT(S)	163	197	206
KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254
LINE	58 USED FOR LINE(S)	235		
LINE	60 USED FOR LINE(S)	145		
LINE	61 USED FOR LINE(S)	307		
LINE	63 USED FOR LINE(S)	157		
LINE	64 USED FOR LINE(S)	367		
LINE	66 USED FOR LINE(S)	169		
LINE	67 USED FOR LINE(S)	403		
LINE	69 USED FOR LINE(S)	181		
LINE	76 USED FOR LINE(S)	213		
LINE	78 USED FOR LINE(S)	201		
LINE	80 USED FOR LINE(S)	189		
LINE	82 USED FOR LINE(S)	149		
LINE	84 USED FOR LINE(S)	225		
LINE	86 USED FOR LINE(S)	237		
LINE	88 USED FOR LINE(S)	249		
LINE	90 USED FOR LINE(S)	261		
LINE	95 USED FOR LINE(S)	220		
LINE	97 USED FOR LINE(S)	295		
LINE	103 USED FOR LINE(S)	340		
LINE	105 USED FOR LINE(S)	187		
LINE	111 USED FOR LINE(S)	397		
LINE	113 USED FOR LINE(S)	376		
LINE	119 USED FOR LINE(S)	325		
LINE	121 USED FOR LINE(S)	268		
LINE	137 USED FOR LINE(S)	223		

*** WARNING ***

Due to merge, line 137 is now meshed.

LINE 138 USED FOR LINE(S) 184

CP= 16.630 TIME= 13:28:11

*** WARNING ***

Due to merge, line 138 is now meshed.

LINE 139 USED FOR LINE(S) 400

CP= 16.640 TIME= 13:28:11

*** WARNING ***

Due to merge, line 139 is now meshed.

LINE 140 USED FOR LINE(S) 265

CP= 16.640 TIME= 13:28:11

*** WARNING ***

Due to merge, line 140 is now meshed.

LINE 148 USED FOR LINE(S) 193

LINE 152 USED FOR LINE(S) 153

LINE 160 USED FOR LINE(S) 165

LINE 163 USED FOR LINE(S) 277

LINE 172 USED FOR LINE(S) 177

LINE 175 USED FOR LINE(S) 337

LINE 196 USED FOR LINE(S) 273

LINE 199 USED FOR LINE(S) 205

LINE 208 USED FOR LINE(S) 285

LINE 211 USED FOR LINE(S) 217

LINE 229 USED FOR LINE(S) 247

LINE 232 USED FOR LINE(S) 297

LINE 241 USED FOR LINE(S) 259

LINE 244 USED FOR LINE(S) 309

LINE 253 USED FOR LINE(S) 271

LINE 256 USED FOR LINE(S) 321

LINE 280 USED FOR LINE(S) 333

LINE 283 USED FOR LINE(S) 289

LINE 292 USED FOR LINE(S) 345

LINE 301 USED FOR LINE(S) 319

LINE 304 USED FOR LINE(S) 357

LINE 313 USED FOR LINE(S) 331

LINE 316 USED FOR LINE(S) 369

LINE 328 USED FOR LINE(S) 381

CP= 16.650 TIME= 13:28:11

LINE 343 USED FOR LINE(S) 349
 LINE 361 USED FOR LINE(S) 379
 LINE 364 USED FOR LINE(S) 393
 LINE 373 USED FOR LINE(S) 391

Create mesh in UCF inner shell
 (L's 105,108 ????)

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 22 STEP 1

10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 32 STEP 1

10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING *** CP= 17.680 TIME= 13:28:13
 Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE *** CP= 17.680 TIME= 13:28:13
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3327	3328	3329	3330	3331	3332	3333	3334	3335	3354
3355	3356	3357	3358	3359	3360	3361	3362	3363	3364
3365	3366	3367	3368	3402	3403	3404	3417	3418	3419
3453	3454	3455	3456	3457	3458	3459	3460	3461	3462
3463	3464	3465	3466	3467	3486	3487	3488	3489	3490
3491	3492	3493	3494						

*** WARNING *** CP= 18.480 TIME= 13:28:14
 Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE ***

CP= 18.480 TIME= 13:28:14

Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2

MAXIMUM NODE NUMBER = 4375

MAXIMUM ELEMENT NUMBER = 3680

Delete concatenated lines

(L's freed up 105,108 ????)

LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 3

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2

MAXIMUM NODE NUMBER = 4738

MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE ***

CP= 21.940 TIME= 13:28:17

Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING ***

CP= 21.990 TIME= 13:28:17

Keypoints 30 and 257 cannot be merged because:

- (1) One or both of them belong to lines.
- (2) The distance between them (3.535443718E-05) exceeds the tolerance (1.6E-06).

*** WARNING ***

CP= 22.000 TIME= 13:28:17

Keypoints 20 and 235 cannot be merged because:

- (1) One or both of them belong to lines.
- (2) The distance between them (3.535443718E-05) exceeds the

tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:

PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50 IN STEPS OF	1
** AREA 43 MESHED WITH		86 QUADRILATERALS,	19 TRIANGLES **
** AREA 44 MESHED WITH		90 QUADRILATERALS,	23 TRIANGLES **
** AREA 45 MESHED WITH		86 QUADRILATERALS,	19 TRIANGLES **
** AREA 46 MESHED WITH		90 QUADRILATERALS,	23 TRIANGLES **

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 27.170 TIME= 13:28:23
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 27.220 TIME= 13:28:23
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 27.220 TIME= 13:28:23
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES	14 TO	16 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4596	

GENERATE NODES AND ELEMENTS

ON LINES	19 TO	21 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4620	

GENERATE NODES AND ELEMENTS

ON LINES	24 TO	26 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	

MAXIMUM ELEMENT NUMBER = 4644

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1

MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.590

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model
View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.
DISPLAY TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 13:28:29 JUN 16, 1995 CP= 32.550
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM
260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD
NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING *** CP= 32.760 TIME= 13:28:29
No space node defined. An enclosed system need not have a space node.
For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSLE COMMAND.

***** ROUTINE COMPLETED ***** CP= 43.720

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 13:28:40 JUN 16, 1995 CP= 43.720
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces. NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES

*** NOTE *** CP= 43.770 TIME= 13:28:40
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.780 TIME= 13:28:40
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.780 TIME= 13:28:40
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.790 TIME= 13:28:40
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.790 TIME= 13:28:40
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.800 TIME= 13:28:40
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.800 TIME= 13:28:40
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.810 TIME= 13:28:40
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.810 TIME= 13:28:40
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.820 TIME= 13:28:40
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.820 TIME= 13:28:40
Nodes cannot be cleared from line 74 because area 17 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.820 TIME= 13:28:40
Nodes cannot be cleared from line 92 because area 26 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.830 TIME= 13:28:40
Nodes cannot be cleared from line 93 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.830 TIME= 13:28:40
Nodes cannot be cleared from line 94 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.830 TIME= 13:28:40
Nodes cannot be cleared from line 96 because area 28 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.840 TIME= 13:28:40
Nodes cannot be cleared from line 98 because area 29 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.840 TIME= 13:28:40
Nodes cannot be cleared from line 100 because area 30 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.840 TIME= 13:28:40
Nodes cannot be cleared from line 102 because area 31 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.850 TIME= 13:28:40
Nodes cannot be cleared from line 104 because area 32 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.850 TIME= 13:28:40
Nodes cannot be cleared from line 106 because area 33 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.860 TIME= 13:28:40
Nodes cannot be cleared from line 107 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.860 TIME= 13:28:40
Nodes cannot be cleared from line 108 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.860 TIME= 13:28:40
Nodes cannot be cleared from line 109 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.860 TIME= 13:28:40
Nodes cannot be cleared from line 110 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.870 TIME= 13:28:40
Nodes cannot be cleared from line 112 because area 36 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.870 TIME= 13:28:40
Nodes cannot be cleared from line 114 because area 37 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.880 TIME= 13:28:40
Nodes cannot be cleared from line 116 because area 38 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.880 TIME= 13:28:40
Nodes cannot be cleared from line 118 because area 39 is meshed. Only

elements are deleted.

*** NOTE *** CP= 43.880 TIME= 13:28:40
Nodes cannot be cleared from line 120 because area 40 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.890 TIME= 13:28:40
Nodes cannot be cleared from line 122 because area 41 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.890 TIME= 13:28:40
Nodes cannot be cleared from line 123 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.890 TIME= 13:28:40
Nodes cannot be cleared from line 124 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.900 TIME= 13:28:40
Nodes cannot be cleared from line 137 because area 47 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.900 TIME= 13:28:40
Nodes cannot be cleared from line 138 because area 48 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.910 TIME= 13:28:40
Nodes cannot be cleared from line 139 because area 49 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.910 TIME= 13:28:40
Nodes cannot be cleared from line 140 because area 50 is meshed. Only elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP= 43.920

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 43.920 TIME= 13:28:41
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO=273.150

SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1379438 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .10000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 45.190 TIME= 13:28:42

All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 13:28:42 JUN 16, 1995 CP= 45.190
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM. TEMP
 ANALYSIS TYPE.TRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO. . . . 273.15
 NEWTON-RAPHSON OPTION.PROGRAM CHOSEN

*** NOTE *** CP= 46.110 TIME= 13:28:43
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 46.520 TIME= 13:28:44
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER. 1
 TIME AT END OF THE LOAD STEP.10000E-05
 AUTOMATIC TIME STEPPING. ON
 INITIAL NUMBER OF SUBSTEPS. 0
 MAXIMUM NUMBER OF SUBSTEPS. 0
 MINIMUM NUMBER OF SUBSTEPS. 1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
 STEP CHANGE BOUNDARY CONDITIONS. NO
 TRANSIENT (INERTIA) EFFECTS. OFF
 TERMINATE ANALYSIS IF NOT CONVERGED.YES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLS.NO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4958.0

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .36780	IXX = 928.4	IXX = 928.4
YC = .91840E-11	IYY = 928.4	IYY = 257.7
ZC = .00000E+00	IZZ = 1857.	IZZ = 1186.
	IXY = -.3220E-12	IXY = .1675E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4957.99

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 63.620 TIME= 13:29:02
 Coefficient ratio exceeds 1.0e8 - Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	11.420	.002
18	1	MATRIX50	.080	.080

Time at end of element matrix formulation CP= 63.62.
HT FLOW CONVERGENCE VALUE= 7299. CRITERION= 7.299

Estimated number of active DOF= 4513.
Maximum wavefront= 311.

Time at end of matrix triangularization CP= 82.05.
Equation solver maximum pivot= 835.577491 at node 3669 TEMP.
Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 238.5
HT FLOW CONVERGENCE VALUE= 109.6 CRITERION= .3746
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -48.59
HT FLOW CONVERGENCE VALUE= 10.28 CRITERION= .3681
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 5.143
HT FLOW CONVERGENCE VALUE= .6529 CRITERION= .3644
EQUIL ITER 4 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3724
HT FLOW CONVERGENCE VALUE= .3342E-01 CRITERION= .3644 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	4.750	.001
18	1	MATRIX50	.080	.080

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.810	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4
*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS
ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM= 4513
R.M.S. WAVEFRONT SIZE= 152.5

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44x.emat
2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44x.esav
5.250 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44x.tri
.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44x.dsub
2.484 MB WRITTEN ON RESULTS FILE: ucf44x.rth
Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM

2 SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 69.138 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 69.192 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.254 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .00000G000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 206.050 TIME= 13:31:32
This load step will be a staticline too long.
(steady-state) step.

*** NOTE *** CP= 206.440 TIME= 13:31:33
The step data was checked and warning messages were found.

Please review output or errors file (ucf44x.err) for these warning messages.

*** NOTE *** CP= 206.440 TIME= 13:31:33
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 13:31:33 JUN 16, 1995 CP= 206.440
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING. ON
INITIAL NUMBER OF SUBSTEPS. 0
MAXIMUM NUMBER OF SUBSTEPS. 0
MINIMUM NUMBER OF SUBSTEPS. 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS. NO
TRANSIENT (INERTIA) EFFECTS. OFF
TERMINATE ANALYSIS IF NOT CONVERGED. YES (EXIT)
CONVERGENCE CONTROLS. USE DEFAULTS
PRINT OUTPUT CONTROLS. NO PRINTOUT
DATABASE OUTPUT CONTROLS. ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1207E+05 CRITERION= 12.08
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 43.32
HT FLOW CONVERGENCE VALUE= 34.97 CRITERION= .3701
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.38
HT FLOW CONVERGENCE VALUE= 3.244 CRITERION= .3599
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.446
HT FLOW CONVERGENCE VALUE= .1903 CRITERION= .3589 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3
*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7
*** TIME = .20000E-05 TIME INC = .10000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP
Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS
FOR AUTOMATIC TIME STEPPING:
USE 40 SUBSTEPS AS A MAXIMUM
USE 5 SUBSTEPS AS A MINIMUM
USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP
AS THE STARTING TIME STEP SIZE.
Begin Transient
Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 69.138 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 69.192 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.254 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS: TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 313.020 TIME= 13:33:40
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
*** TIME = 1.57788 TIME INC = .788940
*** RESPONSE EIGENVALUE = .1117 OSCILLATION LIMIT = .8816E-01
*** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3385 CRITERION= .3589
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3928E-03
HT FLOW CONVERGENCE VALUE= .1668E-04 CRITERION= .3590 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
*** TIME = 3.94470 TIME INC = 2.36682
*** RESPONSE EIGENVALUE = .3800E-01 OSCILLATION LIMIT = .8994E-01
*** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3188 CRITERION= .3589
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2622E-03
HT FLOW CONVERGENCE VALUE= .3609E-04 CRITERION= .3590 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
*** TIME = 10.2562 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .6223E-02 OSCILLATION LIMIT = .3928E-01
*** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3098 CRITERION= .3589
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1676E-03
HT FLOW CONVERGENCE VALUE= .3260E-04 CRITERION= .3590 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
*** TIME = 16.5677 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .2119E-02 OSCILLATION LIMIT = .1338E-01
*** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3060 CRITERION= .3589
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1673E-03
 HT FLOW CONVERGENCE VALUE= .3168E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
 *** TIME = 22.8793 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1908E-02 OSCILLATION LIMIT = .1204E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3026 CRITERION= .3589
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1670E-03
 HT FLOW CONVERGENCE VALUE= .3102E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
 *** TIME = 29.1908 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1803E-02 OSCILLATION LIMIT = .1138E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2994 CRITERION= .3589
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6255E-04
 HT FLOW CONVERGENCE VALUE= .1151E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
 *** TIME = 31.5576 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .1755E-02 OSCILLATION LIMIT = .4155E-02

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:41:55 JUN 16, 1995 CP= 753.680
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 211.2 CRITERION= .4165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7923
 HT FLOW CONVERGENCE VALUE= .4719 CRITERION= .3568
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8863E-01
 HT FLOW CONVERGENCE VALUE= .3163E-01 CRITERION= .3567 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6888E-05 OSCILLATION LIMIT = .5434
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 212.3 CRITERION= .4149
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7967
 HT FLOW CONVERGENCE VALUE= .5460 CRITERION= .3580
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1218
 HT FLOW CONVERGENCE VALUE= .3452E-01 CRITERION= .3580 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7970E-06 OSCILLATION LIMIT = .6288E-01
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 634.0 CRITERION= .7281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.377
 HT FLOW CONVERGENCE VALUE= 1.635 CRITERION= .3566
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4591
 HT FLOW CONVERGENCE VALUE= .1332 CRITERION= .3564 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1037E-05 OSCILLATION LIMIT = .2454

*** AUTO TIME STEP: NEXT TIME INC = .48228E+06 INCREASED (FACTOR = 2.0377)

HT FLOW CONVERGENCE VALUE= 1294. CRITERION= 1.341
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.843
 HT FLOW CONVERGENCE VALUE= 3.703 CRITERION= .3574
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.056
 HT FLOW CONVERGENCE VALUE= .3050 CRITERION= .3569 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 876777. TIME INC = 482275.
 *** RESPONSE EIGENVALUE = .9225E-06 OSCILLATION LIMIT = .4449
 *** AUTO STEP TIME: NEXT TIME INC = .48228E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1294. CRITERION= 1.343
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.843
 HT FLOW CONVERGENCE VALUE= 3.422 CRITERION= .3555
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.052
 HT FLOW CONVERGENCE VALUE= .3057 CRITERION= .3550 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .135905E+07 TIME INC = 482275.
 *** RESPONSE EIGENVALUE = .9107E-06 OSCILLATION LIMIT = .4392
 *** AUTO STEP TIME: NEXT TIME INC = .48228E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1297. CRITERION= 1.344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.843
 HT FLOW CONVERGENCE VALUE= 3.621 CRITERION= .3560
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.055
 HT FLOW CONVERGENCE VALUE= .3091 CRITERION= .3555 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .184133E+07 TIME INC = 482275.
 *** RESPONSE EIGENVALUE = .8631E-06 OSCILLATION LIMIT = .4162
 *** AUTO STEP TIME: NEXT TIME INC = .48228E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1298. CRITERION= 1.346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.843
 HT FLOW CONVERGENCE VALUE= 3.731 CRITERION= .3540
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.038
 HT FLOW CONVERGENCE VALUE= .3095 CRITERION= .3535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .232360E+07 TIME INC = 482275.
 *** RESPONSE EIGENVALUE = .8832E-06 OSCILLATION LIMIT = .4259
 *** AUTO STEP TIME: NEXT TIME INC = .48228E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1301. CRITERION= 1.347
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.843
 HT FLOW CONVERGENCE VALUE= 3.896 CRITERION= .3542
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.034
 HT FLOW CONVERGENCE VALUE= .3127 CRITERION= .3540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .280588E+07 TIME INC = 482275.
 *** RESPONSE EIGENVALUE = .8427E-06 OSCILLATION LIMIT = .4064
 *** AUTO STEP TIME: NEXT TIME INC = .34991E+06 DECREASED (FACTOR = .7255)

HT FLOW CONVERGENCE VALUE= 943.5 CRITERION= 1.008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.514
 HT FLOW CONVERGENCE VALUE= 2.866 CRITERION= .3522
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7146
 HT FLOW CONVERGENCE VALUE= .2171 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .315579E+07 TIME INC = 349913.
 *** RESPONSE EIGENVALUE = .8349E-06 OSCILLATION LIMIT = .2922

*****ANSYS: SOLVE COMMAND*****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:54:41 JUN 16, 1995 CP= 1486.490
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 218.0 CRITERION= .4140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.129
 HT FLOW CONVERGENCE VALUE= .7536 CRITERION= .3551
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2081
 HT FLOW CONVERGENCE VALUE= .5518E-01 CRITERION= .3551 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 35
 *** TIME = .350570E+07 TIME INC = 349913.
 *** RESPONSE EIGENVALUE = .9843E-06 OSCILLATION LIMIT = .3444
 *** AUTO STEP TIME: NEXT TIME INC = .34991E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 216.2 CRITERION= .4159
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7527
 HT FLOW CONVERGENCE VALUE= .5779 CRITERION= .3519
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1223
 HT FLOW CONVERGENCE VALUE= .4538E-01 CRITERION= .3519 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 37
 *** TIME = .385562E+07 TIME INC = 349913.
 *** RESPONSE EIGENVALUE = .5549E-05 OSCILLATION LIMIT = 1.942
 *** AUTO TIME STEP: NEXT TIME INC = .11664E+06 DECREASED (FACTOR = .3333)

HT FLOW CONVERGENCE VALUE= 73.37 CRITERION= .3594
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4113
 HT FLOW CONVERGENCE VALUE= .2700 CRITERION= .3544 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 38
 *** TIME = .397225E+07 TIME INC = 116638.
 *** RESPONSE EIGENVALUE = .4554E-05 OSCILLATION LIMIT = .5311
 *** AUTO STEP TIME: NEXT TIME INC = .11664E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.54 CRITERION= .3617
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2509
 HT FLOW CONVERGENCE VALUE= .1868 CRITERION= .3521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 39
 *** TIME = .408889E+07 TIME INC = 116638.
 *** RESPONSE EIGENVALUE = .9600E-05 OSCILLATION LIMIT = 1.120
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .6764)

HT FLOW CONVERGENCE VALUE= 49.96 CRITERION= .3555
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1920
 HT FLOW CONVERGENCE VALUE= .1561 CRITERION= .3542 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 40
 *** TIME = .416779E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1077E-04 OSCILLATION LIMIT = .8496
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.16 CRITERION= .3575
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
 HT FLOW CONVERGENCE VALUE= .1271 CRITERION= .3520 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 41
 *** TIME = .424668E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1306E-04 OSCILLATION LIMIT = 1.030
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.93 CRITERION= .3555
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1900
 HT FLOW CONVERGENCE VALUE= .1549 CRITERION= .3540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 42

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*** TIME = .432557E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9287E-05    OSCILLATION LIMIT = .7327
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.18    CRITERION= .3573
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
    HT FLOW CONVERGENCE VALUE= .1304    CRITERION= .3520    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 8 COMPLETED.    CUM ITER = 43
*** TIME = .440447E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1068E-04    OSCILLATION LIMIT = .8423
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.90    CRITERION= .3554
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1887
    HT FLOW CONVERGENCE VALUE= .1529    CRITERION= .3538    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 9 COMPLETED.    CUM ITER = 44
*** TIME = .448336E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8475E-05    OSCILLATION LIMIT = .6687
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.21    CRITERION= .3572
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
    HT FLOW CONVERGENCE VALUE= .1317    CRITERION= .3519    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 10 COMPLETED.    CUM ITER = 45
*** TIME = .456226E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9331E-05    OSCILLATION LIMIT = .7362
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.88    CRITERION= .3554
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1876
    HT FLOW CONVERGENCE VALUE= .1515    CRITERION= .3537    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 11 COMPLETED.    CUM ITER = 46
*** TIME = .464115E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7705E-05    OSCILLATION LIMIT = .6079
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.23    CRITERION= .3570
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
    HT FLOW CONVERGENCE VALUE= .1327    CRITERION= .3518    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 12 COMPLETED.    CUM ITER = 47
*** TIME = .472004E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8270E-05    OSCILLATION LIMIT = .6525
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.86    CRITERION= .3553
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1866
    HT FLOW CONVERGENCE VALUE= .1527    CRITERION= .3535    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 13 COMPLETED.    CUM ITER = 48
*** TIME = .479894E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7041E-05    OSCILLATION LIMIT = .5555
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.25    CRITERION= .3568
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
    HT FLOW CONVERGENCE VALUE= .1377    CRITERION= .3518    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 14 COMPLETED.    CUM ITER = 49
*** TIME = .487783E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7399E-05    OSCILLATION LIMIT = .5837
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.83    CRITERION= .3552
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1857
    HT FLOW CONVERGENCE VALUE= .1546    CRITERION= .3534    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 15 COMPLETED. CUM ITER = 50
*** TIME = .495673E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6462E-05 OSCILLATION LIMIT = .5098
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.27 CRITERION= .3567
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
HT FLOW CONVERGENCE VALUE= .1383 CRITERION= .3517 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 16 COMPLETED. CUM ITER = 51
*** TIME = .503562E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6665E-05 OSCILLATION LIMIT = .5258
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.81 CRITERION= .3552
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1848
HT FLOW CONVERGENCE VALUE= .1537 CRITERION= .3532 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 17 COMPLETED. CUM ITER = 52
*** TIME = .511451E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5943E-05 OSCILLATION LIMIT = .4689
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.29 CRITERION= .3565
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
HT FLOW CONVERGENCE VALUE= .1390 CRITERION= .3516 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 18 COMPLETED. CUM ITER = 53
*** TIME = .519341E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6031E-05 OSCILLATION LIMIT = .4758
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.80 CRITERION= .3551
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1840
HT FLOW CONVERGENCE VALUE= .1547 CRITERION= .3531 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 19 COMPLETED. CUM ITER = 54
*** TIME = .527230E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5479E-05 OSCILLATION LIMIT = .4323
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.31 CRITERION= .3564
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
HT FLOW CONVERGENCE VALUE= .1418 CRITERION= .3515 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 20 COMPLETED. CUM ITER = 55
*** TIME = .535120E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5487E-05 OSCILLATION LIMIT = .4329
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.78 CRITERION= .3550
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1832
HT FLOW CONVERGENCE VALUE= .1553 CRITERION= .3529 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 21 COMPLETED. CUM ITER = 56
*** TIME = .543009E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5070E-05 OSCILLATION LIMIT = .4000
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.32 CRITERION= .3563
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
HT FLOW CONVERGENCE VALUE= .1421 CRITERION= .3515 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 22 COMPLETED. CUM ITER = 57
*** TIME = .550898E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5012E-05 OSCILLATION LIMIT = .3954
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.76 CRITERION= .3549

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1825
 HT FLOW CONVERGENCE VALUE= .1548 CRITERION= .3528 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 23 COMPLETED. CUM ITER = 58
 *** TIME = .558788E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4699E-05 OSCILLATION LIMIT = .3707
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.34 CRITERION= .3561
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
 HT FLOW CONVERGENCE VALUE= .1426 CRITERION= .3514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 59
 *** TIME = .566677E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4593E-05 OSCILLATION LIMIT = .3623
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.74 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1819
 HT FLOW CONVERGENCE VALUE= .1544 CRITERION= .3526 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 60
 *** TIME = .574567E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4367E-05 OSCILLATION LIMIT = .3445
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.36 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
 HT FLOW CONVERGENCE VALUE= .1431 CRITERION= .3513 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 61
 *** TIME = .582456E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4226E-05 OSCILLATION LIMIT = .3334
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.73 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1812
 HT FLOW CONVERGENCE VALUE= .1560 CRITERION= .3525 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 62
 *** TIME = .590345E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4068E-05 OSCILLATION LIMIT = .3210
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.37 CRITERION= .3558
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1697
 HT FLOW CONVERGENCE VALUE= .1450 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 63
 *** TIME = .598235E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3902E-05 OSCILLATION LIMIT = .3079
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.71 CRITERION= .3547
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1806
 HT FLOW CONVERGENCE VALUE= .1554 CRITERION= .3524 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 64
 *** TIME = .606124E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3801E-05 OSCILLATION LIMIT = .2999
 *** AUTO TIME STEP: NEXT TIME INC = .13155E+06 INCREASED (FACTOR = 1.6675)

HT FLOW CONVERGENCE VALUE= 81.04 CRITERION= .3616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2830
 HT FLOW CONVERGENCE VALUE= .2487 CRITERION= .3511 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 65
 *** TIME = .619280E+07 TIME INC = .131555
 *** RESPONSE EIGENVALUE = .11575E-05 OSCILLATION LIMIT = .2072
 *** AUTO TIME STEP: NEXT TIME INC = .11875E+06 DECREASED (FACTOR = .9027)

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HT FLOW CONVERGENCE VALUE= 74.41      CRITERION= .3588
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2665
HT FLOW CONVERGENCE VALUE= .2319      CRITERION= .3522    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 66
*** TIME = .631155E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .2223E-05 OSCILLATION LIMIT = .2640

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX 14:27:12 JUN 16, 1995 CP= 3255.570
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 47.09      CRITERION= .3554
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
HT FLOW CONVERGENCE VALUE= .1437      CRITERION= .3511    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 67
*** TIME = .643031E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .3089E-05 OSCILLATION LIMIT = .3668
*** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 48.30      CRITERION= .3544
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1449      CRITERION= .3520    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 68
*** TIME = .654906E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .4432E-05 OSCILLATION LIMIT = .5263
*** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 47.10      CRITERION= .3552
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
HT FLOW CONVERGENCE VALUE= .1423      CRITERION= .3510    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 3 COMPLETED. CUM ITER = 69
*** TIME = .666782E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .3002E-05 OSCILLATION LIMIT = .3565
*** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 48.29      CRITERION= .3543
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1475      CRITERION= .3519    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 4 COMPLETED. CUM ITER = 70
*** TIME = .678657E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .3487E-05 OSCILLATION LIMIT = .4141
*** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 47.11      CRITERION= .3551
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
HT FLOW CONVERGENCE VALUE= .1410      CRITERION= .3508    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 5 COMPLETED. CUM ITER = 71
*** TIME = .690533E+07 TIME INC = 118755.
*** RESPONSE EIGENVALUE = .3205E-05 OSCILLATION LIMIT = .3806
*** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 48.28      CRITERION= .3541
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1730
HT FLOW CONVERGENCE VALUE= .1476      CRITERION= .3517    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 6 COMPLETED. CUM ITER = 72
*** TIME = .702408E+07 TIME INC = 118755.

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*** RESPONSE EIGENVALUE = .3266E-05 OSCILLATION LIMIT = .3879
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.12 CRITERION= .3549
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1408 CRITERION= .3507 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 7 COMPLETED. CUM ITER = 73
 *** TIME = .714283E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .3115E-05 OSCILLATION LIMIT = .3700
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.27 CRITERION= .3540
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1727
 HT FLOW CONVERGENCE VALUE= .1508 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 8 COMPLETED. CUM ITER = 74
 *** TIME = .726159E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .3140E-05 OSCILLATION LIMIT = .3729
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.12 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1467 CRITERION= .3506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 9 COMPLETED. CUM ITER = 75
 *** TIME = .738034E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .3008E-05 OSCILLATION LIMIT = .3572
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.27 CRITERION= .3538
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1725
 HT FLOW CONVERGENCE VALUE= .1538 CRITERION= .3514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 10 COMPLETED. CUM ITER = 76
 *** TIME = .749910E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .3034E-05 OSCILLATION LIMIT = .3603
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.13 CRITERION= .3546
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1478 CRITERION= .3504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 11 COMPLETED. CUM ITER = 77
 *** TIME = .761785E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2904E-05 OSCILLATION LIMIT = .3449
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.26 CRITERION= .3537
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1722
 HT FLOW CONVERGENCE VALUE= .1550 CRITERION= .3513 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 12 COMPLETED. CUM ITER = 78
 *** TIME = .773661E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2933E-05 OSCILLATION LIMIT = .3483
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.14 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1480 CRITERION= .3503 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 13 COMPLETED. CUM ITER = 79
 *** TIME = .785536E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2807E-05 OSCILLATION LIMIT = .3334
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.25 CRITERION= .3536
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1720
 HT FLOW CONVERGENCE VALUE= .1553 CRITERION= .3511 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 14 COMPLETED. CUM ITER = 80
 *** TIME = .797412E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2839E-05 OSCILLATION LIMIT = .3371
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.14 CRITERION= .3543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1498 CRITERION= .3502 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 15 COMPLETED. CUM ITER = 81
 *** TIME = .809287E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2715E-05 OSCILLATION LIMIT = .3224
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.24 CRITERION= .3534
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1718
 HT FLOW CONVERGENCE VALUE= .1565 CRITERION= .3509 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 82
 *** TIME = .821163E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2751E-05 OSCILLATION LIMIT = .3267
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.15 CRITERION= .3541
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1498 CRITERION= .3500 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 83
 *** TIME = .833038E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2630E-05 OSCILLATION LIMIT = .3123
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.24 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1716
 HT FLOW CONVERGENCE VALUE= .1563 CRITERION= .3508 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 84
 *** TIME = .844914E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2669E-05 OSCILLATION LIMIT = .3170
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.16 CRITERION= .3540
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1499 CRITERION= .3499 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 85
 *** TIME = .856789E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2549E-05 OSCILLATION LIMIT = .3027
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.23 CRITERION= .3532
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1713
 HT FLOW CONVERGENCE VALUE= .1562 CRITERION= .3506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 86
 *** TIME = .868665E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2591E-05 OSCILLATION LIMIT = .3077
 *** AUTO STEP TIME: NEXT TIME INC = .11875E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 47.16 CRITERION= .3538
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1655
 HT FLOW CONVERGENCE VALUE= .1500 CRITERION= .3498 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 87
 *** TIME = .880540E+07 TIME INC = 118755.
 *** RESPONSE EIGENVALUE = .2473E-05 OSCILLATION LIMIT = .2937
 *** AUTO STEP TIME: NEXT TIME INC = .20219E+06 INCREASED (FACTOR = 1.7026)

HT FLOW CONVERGENCE VALUE= 81.68 CRITERION= .3591
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2874

HT FLOW CONVERGENCE VALUE= .2667 CRITERION= .3504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 88
 *** TIME = .900759E+07 TIME INC = 202193.
 *** RESPONSE EIGENVALUE = .1290E-05 OSCILLATION LIMIT = .2609
 *** AUTO TIME STEP: NEXT TIME INC = .22986E+06 INCREASED (FACTOR = 1.1368)

HT FLOW CONVERGENCE VALUE= 91.71 CRITERION= .3623
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3203
 HT FLOW CONVERGENCE VALUE= .2969 CRITERION= .3495 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 89
 *** TIME = .923745E+07 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1342E-05 OSCILLATION LIMIT = .3084
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 92.77 CRITERION= .3615
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3261
 HT FLOW CONVERGENCE VALUE= .3040 CRITERION= .3502 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 90
 *** TIME = .946731E+07 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1764E-05 OSCILLATION LIMIT = .4056

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:51:05 JUN 16, 1995 CP= 4570.440
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 70.29 CRITERION= .3572
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2282 CRITERION= .3493 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 91
 *** TIME = .969717E+07 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1931E-05 OSCILLATION LIMIT = .4440
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.30 CRITERION= .3565
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2504
 HT FLOW CONVERGENCE VALUE= .2287 CRITERION= .3499 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 92
 *** TIME = .992703E+07 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .2590E-05 OSCILLATION LIMIT = .5953
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.29 CRITERION= .3569
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2294 CRITERION= .3491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 93
 *** TIME = .101569E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1673E-05 OSCILLATION LIMIT = .3845
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.30 CRITERION= .3562
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2506
 HT FLOW CONVERGENCE VALUE= .2330 CRITERION= .3496 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 4 COMPLETED. CUM ITER = 94
 *** TIME = .103867E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .2258E-05 OSCILLATION LIMIT = .5191
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.30 CRITERION= .3567
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2296 CRITERION= .3488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 5 COMPLETED. CUM ITER = 95
 *** TIME = .106166E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1862E-05 OSCILLATION LIMIT = .4279
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.30 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2505
 HT FLOW CONVERGENCE VALUE= .2334 CRITERION= .3494 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 6 COMPLETED. CUM ITER = 96
 *** TIME = .108465E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .2110E-05 OSCILLATION LIMIT = .4851
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.30 CRITERION= .3564
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2292 CRITERION= .3485 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 7 COMPLETED. CUM ITER = 97
 *** TIME = .110763E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1923E-05 OSCILLATION LIMIT = .4419
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.29 CRITERION= .3557
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2505
 HT FLOW CONVERGENCE VALUE= .2335 CRITERION= .3491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 8 COMPLETED. CUM ITER = 98
 *** TIME = .113062E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .2047E-05 OSCILLATION LIMIT = .4706
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.30 CRITERION= .3561
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2288 CRITERION= .3483 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 9 COMPLETED. CUM ITER = 99
 *** TIME = .115360E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1935E-05 OSCILLATION LIMIT = .4448
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.29 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2504
 HT FLOW CONVERGENCE VALUE= .2333 CRITERION= .3488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 10 COMPLETED. CUM ITER = 100
 *** TIME = .117659E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .2014E-05 OSCILLATION LIMIT = .4629
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.31 CRITERION= .3559
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2285 CRITERION= .3480 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 11 COMPLETED. CUM ITER = 101
 *** TIME = .119958E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1931E-05 OSCILLATION LIMIT = .4438
 *** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 71.29 CRITERION= .3552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2503
 HT FLOW CONVERGENCE VALUE= .2330 CRITERION= .3486 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 102
 *** TIME = .122256E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1992E-05 OSCILLATION LIMIT = .4579

*** AUTO STEP TIME: NEXT TIME INC = .22986E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 70.31 CRITERION= .3556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2460
 HT FLOW CONVERGENCE VALUE= .2286 CRITERION= .3478 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 103
 *** TIME = .124555E+08 TIME INC = 229859.
 *** RESPONSE EIGENVALUE = .1921E-05 OSCILLATION LIMIT = .4415
 *** AUTO TIME STEP: NEXT TIME INC = .16760E+06 DECREASED (FACTOR = .7291)

HT FLOW CONVERGENCE VALUE= 52.13 CRITERION= .3516
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1837
 HT FLOW CONVERGENCE VALUE= .1693 CRITERION= .3483 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 14 COMPLETED. CUM ITER = 104
 *** TIME = .126231E+08 TIME INC = 167596.
 *** RESPONSE EIGENVALUE = .2870E-05 OSCILLATION LIMIT = .4810

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:04:51 JUN 16, 1995 CP= 5342.160
 FOR SUPPORT CALL ROBERT BAHNEY. PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 41.54 CRITERION= .3508
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
 HT FLOW CONVERGENCE VALUE= .1344 CRITERION= .3476 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 105
 *** TIME = .127907E+08 TIME INC = 167596.
 *** RESPONSE EIGENVALUE = .2822E-05 OSCILLATION LIMIT = .4729
 *** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.48 CRITERION= .3502
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1497
 HT FLOW CONVERGENCE VALUE= .1374 CRITERION= .3481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 106
 *** TIME = .129583E+08 TIME INC = 167596.
 *** RESPONSE EIGENVALUE = .3043E-05 OSCILLATION LIMIT = .5100
 *** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.54 CRITERION= .3506
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
 HT FLOW CONVERGENCE VALUE= .1347 CRITERION= .3474 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 107
 *** TIME = .131259E+08 TIME INC = 167596.
 *** RESPONSE EIGENVALUE = .2577E-05 OSCILLATION LIMIT = .4318
 *** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.48 CRITERION= .3500
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1497
 HT FLOW CONVERGENCE VALUE= .1381 CRITERION= .3480 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 108
 *** TIME = .132935E+08 TIME INC = 167596.
 *** RESPONSE EIGENVALUE = .2819E-05 OSCILLATION LIMIT = .4724
 *** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.54 CRITERION= .3505
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
 HT FLOW CONVERGENCE VALUE= .1353 CRITERION= .3473 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 109

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*** TIME = .134611E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2665E-05    OSCILLATION LIMIT = .4466
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.47    CRITERION= .3498
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1496
    HT FLOW CONVERGENCE VALUE= .1401    CRITERION= .3478    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 110
*** TIME = .136287E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2722E-05    OSCILLATION LIMIT = .4562
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.55    CRITERION= .3503
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
    HT FLOW CONVERGENCE VALUE= .1364    CRITERION= .3471    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 111
*** TIME = .137962E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2658E-05    OSCILLATION LIMIT = .4456
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.47    CRITERION= .3496
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1495
    HT FLOW CONVERGENCE VALUE= .1401    CRITERION= .3476    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 112
*** TIME = .139638E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2671E-05    OSCILLATION LIMIT = .4477
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.55    CRITERION= .3501
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
    HT FLOW CONVERGENCE VALUE= .1363    CRITERION= .3469    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 113
*** TIME = .141314E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2631E-05    OSCILLATION LIMIT = .4409
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.47    CRITERION= .3495
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1494
    HT FLOW CONVERGENCE VALUE= .1400    CRITERION= .3474    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 114
*** TIME = .142990E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2633E-05    OSCILLATION LIMIT = .4412
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.55    CRITERION= .3499
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
    HT FLOW CONVERGENCE VALUE= .1362    CRITERION= .3467    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 115
*** TIME = .144666E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2600E-05    OSCILLATION LIMIT = .4357
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.46    CRITERION= .3493
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1493
    HT FLOW CONVERGENCE VALUE= .1398    CRITERION= .3472    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 116
*** TIME = .146342E+08    TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2598E-05    OSCILLATION LIMIT = .4354
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.56    CRITERION= .3497
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
    HT FLOW CONVERGENCE VALUE= .1361    CRITERION= .3466    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 117
*** TIME = .148018E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2568E-05 OSCILLATION LIMIT = .4304
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.46 CRITERION= .3491
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1493
HT FLOW CONVERGENCE VALUE= .1397 CRITERION= .3470 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 118
*** TIME = .149694E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2565E-05 OSCILLATION LIMIT = .4299
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.56 CRITERION= .3495
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
HT FLOW CONVERGENCE VALUE= .1361 CRITERION= .3464 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 119
*** TIME = .151370E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2538E-05 OSCILLATION LIMIT = .4253
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.46 CRITERION= .3489
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1492
HT FLOW CONVERGENCE VALUE= .1396 CRITERION= .3468 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 120
*** TIME = .153046E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2534E-05 OSCILLATION LIMIT = .4246
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.56 CRITERION= .3493
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1461
HT FLOW CONVERGENCE VALUE= .1360 CRITERION= .3462 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 121
*** TIME = .154722E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2509E-05 OSCILLATION LIMIT = .4204
*** AUTO STEP TIME: NEXT TIME INC = .16760E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.46 CRITERION= .3488
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1491
HT FLOW CONVERGENCE VALUE= .1399 CRITERION= .3467 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 18 COMPLETED. CUM ITER = 122
*** TIME = .156398E+08 TIME INC = 167596.
*** RESPONSE EIGENVALUE = .2504E-05 OSCILLATION LIMIT = .4196
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 DECREASED (FACTOR = .8295)

HT FLOW CONVERGENCE VALUE= 34.41 CRITERION= .3484
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1212
HT FLOW CONVERGENCE VALUE= .1132 CRITERION= .3460 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 19 COMPLETED. CUM ITER = 123
*** TIME = .157788E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3088E-05 OSCILLATION LIMIT = .4293

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:22:29 JUN 16, 1995 CP= 6384.370
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GLD/MTU SNF

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .3473

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1064
HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3465 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 124
*** TIME = .159179E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3410E-05 OSCILLATION LIMIT = .4741
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.28 CRITERION= .3478
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
HT FLOW CONVERGENCE VALUE= .9729E-01 CRITERION= .3459 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 125
*** TIME = .160569E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3827E-05 OSCILLATION LIMIT = .5320
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .3472
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1062
HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3464 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 126
*** TIME = .161959E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3265E-05 OSCILLATION LIMIT = .4539
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.28 CRITERION= .3476
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
HT FLOW CONVERGENCE VALUE= .9774E-01 CRITERION= .3458 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 127
*** TIME = .163349E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3507E-05 OSCILLATION LIMIT = .4876
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .3471
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1061
HT FLOW CONVERGENCE VALUE= .1015 CRITERION= .3462 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 128
*** TIME = .164740E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3314E-05 OSCILLATION LIMIT = .4608
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.28 CRITERION= .3475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
HT FLOW CONVERGENCE VALUE= .9782E-01 CRITERION= .3456 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 129
*** TIME = .166130E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3391E-05 OSCILLATION LIMIT = .4714
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .3469
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1060
HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .3461 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 130
*** TIME = .167520E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3276E-05 OSCILLATION LIMIT = .4554
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.29 CRITERION= .3473
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
HT FLOW CONVERGENCE VALUE= .9819E-01 CRITERION= .3455 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 131
*** TIME = .168910E+08 TIME INC = 139024.
*** RESPONSE EIGENVALUE = .3323E-05 OSCILLATION LIMIT = .4619
*** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .3468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1059
 HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 132
 *** TIME = .170300E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3225E-05 OSCILLATION LIMIT = .4484
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.29 CRITERION= .3472
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9939E-01 CRITERION= .3453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 133
 *** TIME = .171691E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3264E-05 OSCILLATION LIMIT = .4537
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .3466
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1058
 HT FLOW CONVERGENCE VALUE= .1027 CRITERION= .3458 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 134
 *** TIME = .173081E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3175E-05 OSCILLATION LIMIT = .4415
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.29 CRITERION= .3470
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9942E-01 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 135
 *** TIME = .174471E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3209E-05 OSCILLATION LIMIT = .4461
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.15 CRITERION= .3465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1058
 HT FLOW CONVERGENCE VALUE= .1025 CRITERION= .3456 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 136
 *** TIME = .175861E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3128E-05 OSCILLATION LIMIT = .4348
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .3469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9936E-01 CRITERION= .3451 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 137
 *** TIME = .177252E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3158E-05 OSCILLATION LIMIT = .4390
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.15 CRITERION= .3464
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1057
 HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .3455 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 138
 *** TIME = .178642E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3082E-05 OSCILLATION LIMIT = .4285
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .3467
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9940E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 139
 *** TIME = .180032E+08 TIME INC = 139024.

*** RESPONSE EIGENVALUE = .3109E-05 OSCILLATION LIMIT = .4323
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.15 CRITERION= .3462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1056
 HT FLOW CONVERGENCE VALUE= .1023 CRITERION= .3453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 140
 *** TIME = .181422E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3039E-05 OSCILLATION LIMIT = .4225
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .3466
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9940E-01 CRITERION= .3448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 141
 *** TIME = .182813E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3063E-05 OSCILLATION LIMIT = .4259
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.14 CRITERION= .3461
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1055
 HT FLOW CONVERGENCE VALUE= .1022 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 142
 *** TIME = .184203E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .2998E-05 OSCILLATION LIMIT = .4168
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.31 CRITERION= .3464
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9943E-01 CRITERION= .3446 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 143
 *** TIME = .185593E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .3020E-05 OSCILLATION LIMIT = .4199
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.14 CRITERION= .3459
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1054
 HT FLOW CONVERGENCE VALUE= .1022 CRITERION= .3450 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 144
 *** TIME = .186983E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .2960E-05 OSCILLATION LIMIT = .4115
 *** AUTO STEP TIME: NEXT TIME INC = .13902E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.31 CRITERION= .3463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1033
 HT FLOW CONVERGENCE VALUE= .9947E-01 CRITERION= .3445 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 145
 *** TIME = .188374E+08 TIME INC = 139024.
 *** RESPONSE EIGENVALUE = .2980E-05 OSCILLATION LIMIT = .4142
 *** AUTO TIME STEP: NEXT TIME INC = 97233. DECREASED (FACTOR = .6994)

HT FLOW CONVERGENCE VALUE= 21.21 CRITERION= .3451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7440E-01
 HT FLOW CONVERGENCE VALUE= .7115E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 23 COMPLETED. CUM ITER = 146
 *** TIME = .189346E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4466E-05 OSCILLATION LIMIT = .4343

***** ANSYS SOLVE ... COMMAND *****

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.67 CRITERION= .3454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .5981E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 1 COMPLETED. CUM ITER = 147
 *** TIME = .190318E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4657E-05 OSCILLATION LIMIT = .4528
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.47 CRITERION= .3449
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6474E-01
 HT FLOW CONVERGENCE VALUE= .6179E-01 CRITERION= .3448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 2 COMPLETED. CUM ITER = 148
 *** TIME = .191291E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4575E-05 OSCILLATION LIMIT = .4449
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.67 CRITERION= .3453
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .5994E-01 CRITERION= .3443 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 3 COMPLETED. CUM ITER = 149
 *** TIME = .192263E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4470E-05 OSCILLATION LIMIT = .4346
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.47 CRITERION= .3448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6467E-01
 HT FLOW CONVERGENCE VALUE= .6198E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 4 COMPLETED. CUM ITER = 150
 *** TIME = .193235E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4311E-05 OSCILLATION LIMIT = .4192
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.67 CRITERION= .3451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6002E-01 CRITERION= .3442 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 5 COMPLETED. CUM ITER = 151
 *** TIME = .194208E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4418E-05 OSCILLATION LIMIT = .4296
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.46 CRITERION= .3447
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6460E-01
 HT FLOW CONVERGENCE VALUE= .6204E-01 CRITERION= .3446 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 152
 *** TIME = .195180E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4195E-05 OSCILLATION LIMIT = .4079
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.68 CRITERION= .3450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6009E-01 CRITERION= .3441 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 153
 *** TIME = .196152E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4311E-05 OSCILLATION LIMIT = .4192
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.46 CRITERION= .3446
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6453E-01

HT FLOW CONVERGENCE VALUE= .6199E-01 CRITERION= .3445 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 154
 *** TIME = .197125E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4098E-05 OSCILLATION LIMIT = .3985
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.68 CRITERION= .3449
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6010E-01 CRITERION= .3440 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 155
 *** TIME = .198097E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4209E-05 OSCILLATION LIMIT = .4092
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.46 CRITERION= .3445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6447E-01
 HT FLOW CONVERGENCE VALUE= .6192E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 10 COMPLETED. CUM ITER = 156
 *** TIME = .199069E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4008E-05 OSCILLATION LIMIT = .3897
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.69 CRITERION= .3448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6013E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 11 COMPLETED. CUM ITER = 157
 *** TIME = .200041E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4113E-05 OSCILLATION LIMIT = .3999
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.45 CRITERION= .3444
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6440E-01
 HT FLOW CONVERGENCE VALUE= .6186E-01 CRITERION= .3443 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 12 COMPLETED. CUM ITER = 158
 *** TIME = .201014E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3924E-05 OSCILLATION LIMIT = .3816
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.69 CRITERION= .3447
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6014E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 13 COMPLETED. CUM ITER = 159
 *** TIME = .201986E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .4024E-05 OSCILLATION LIMIT = .3913
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.45 CRITERION= .3443
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6434E-01
 HT FLOW CONVERGENCE VALUE= .6182E-01 CRITERION= .3442 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 14 COMPLETED. CUM ITER = 160
 *** TIME = .202958E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3846E-05 OSCILLATION LIMIT = .3739
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.69 CRITERION= .3446
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6017E-01 CRITERION= .3438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 15 COMPLETED. CUM ITER = 161
 *** TIME = .203931E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3941E-05 OSCILLATION LIMIT = .3832
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.45 CRITERION= .3442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6428E-01
 HT FLOW CONVERGENCE VALUE= .6171E-01 CRITERION= .3441 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 16 COMPLETED. CUM ITER = 162
 *** TIME = .204903E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3773E-05 OSCILLATION LIMIT = .3669
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.70 CRITERION= .3445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6015E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 17 COMPLETED. CUM ITER = 163
 *** TIME = .205875E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3863E-05 OSCILLATION LIMIT = .3756
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.44 CRITERION= .3442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6422E-01
 HT FLOW CONVERGENCE VALUE= .6161E-01 CRITERION= .3440 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 18 COMPLETED. CUM ITER = 164
 *** TIME = .206848E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3705E-05 OSCILLATION LIMIT = .3603
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.70 CRITERION= .3444
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6014E-01 CRITERION= .3436 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 165
 *** TIME = .207820E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3791E-05 OSCILLATION LIMIT = .3686
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.44 CRITERION= .3441
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6417E-01
 HT FLOW CONVERGENCE VALUE= .6157E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 166
 *** TIME = .208792E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3641E-05 OSCILLATION LIMIT = .3541
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.70 CRITERION= .3443
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6020E-01 CRITERION= .3435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 167
 *** TIME = .209765E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3723E-05 OSCILLATION LIMIT = .3620
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.44 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6412E-01
 HT FLOW CONVERGENCE VALUE= .6153E-01 CRITERION= .3438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 168
 *** TIME = .210737E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3582E-05 OSCILLATION LIMIT = .3482
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.71 CRITERION= .3442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6022E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 169
 *** TIME = .211709E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3660E-05 OSCILLATION LIMIT = .3558

*** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.43 CRITERION= .3439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6407E-01
 HT FLOW CONVERGENCE VALUE= .6148E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 170
 *** TIME = .212682E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3525E-05 OSCILLATION LIMIT = .3428
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.71 CRITERION= .3441
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6027E-01 CRITERION= .3433 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 25 COMPLETED. CUM ITER = 171
 *** TIME = .213654E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3600E-05 OSCILLATION LIMIT = .3500
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.43 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6402E-01
 HT FLOW CONVERGENCE VALUE= .6146E-01 CRITERION= .3436 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 26 COMPLETED. CUM ITER = 172
 *** TIME = .214626E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3473E-05 OSCILLATION LIMIT = .3377
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.71 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6032E-01 CRITERION= .3432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 27 COMPLETED. CUM ITER = 173
 *** TIME = .215599E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3544E-05 OSCILLATION LIMIT = .3446
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.43 CRITERION= .3437
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6397E-01
 HT FLOW CONVERGENCE VALUE= .6144E-01 CRITERION= .3435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 28 COMPLETED. CUM ITER = 174
 *** TIME = .216571E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3423E-05 OSCILLATION LIMIT = .3328
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .3439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6036E-01 CRITERION= .3431 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 29 COMPLETED. CUM ITER = 175
 *** TIME = .217543E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3492E-05 OSCILLATION LIMIT = .3395
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.42 CRITERION= .3436
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6392E-01
 HT FLOW CONVERGENCE VALUE= .6141E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 30 COMPLETED. CUM ITER = 176
 *** TIME = .218516E+08 TIME INC = 97232.5
 *** RESPONSE EIGENVALUE = .3376E-05 OSCILLATION LIMIT = .3283
 *** AUTO STEP TIME: NEXT TIME INC = 97233. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6288E-01
 HT FLOW CONVERGENCE VALUE= .6043E-01 CRITERION= .3430 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 31 COMPLETED. CUM ITER = 177

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*** TIME = .219488E+08    TIME INC = 97232.5
*** RESPONSE EIGENVALUE = .3443E-05    OSCILLATION LIMIT = .3347
*** AUTO TIME STEP: NEXT TIME INC = 70776.    DECREASED (FACTOR = .7279)

HT FLOW CONVERGENCE VALUE= 13.51    CRITERION= .3433
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4683E-01
HT FLOW CONVERGENCE VALUE= .4455E-01    CRITERION= .3433    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 32 COMPLETED. CUM ITER = 178
*** TIME = .220196E+08    TIME INC = 70776.1
*** RESPONSE EIGENVALUE = .4772E-05    OSCILLATION LIMIT = .3377
*** AUTO STEP TIME: NEXT TIME INC = 70776.    UNCHANGED
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HT FLOW CONVERGENCE VALUE= 12.82    CRITERION= .3435
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4577E-01
HT FLOW CONVERGENCE VALUE= .4365E-01    CRITERION= .3429    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 33 COMPLETED. CUM ITER = 179
*** TIME = .220904E+08    TIME INC = 70776.1
*** RESPONSE EIGENVALUE = .4706E-05    OSCILLATION LIMIT = .3331
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303    VERSION=HP 9000/7XX    16:16:58 JUN 16, 1995 CP= 9475.620
FOR SUPPORT CALL ROBERT BAHNEY    PHONE (702) 794-5337    FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 13.02    CRITERION= .3432
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4506E-01
HT FLOW CONVERGENCE VALUE= .4356E-01    CRITERION= .3432    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 180
*** TIME = .221692E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4042E-05    OSCILLATION LIMIT = .3189
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED
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HT FLOW CONVERGENCE VALUE= 12.32    CRITERION= .3434
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4167E-01    CRITERION= .3429    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 181
*** TIME = .222481E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5291E-05    OSCILLATION LIMIT = .4174
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED
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HT FLOW CONVERGENCE VALUE= 13.01    CRITERION= .3431
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4498E-01
HT FLOW CONVERGENCE VALUE= .4294E-01    CRITERION= .3431    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 182
*** TIME = .223270E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4634E-05    OSCILLATION LIMIT = .3656
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED
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HT FLOW CONVERGENCE VALUE= 12.32    CRITERION= .3434
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4187E-01    CRITERION= .3428    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 183
*** TIME = .224059E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4871E-05    OSCILLATION LIMIT = .3843
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED
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HT FLOW CONVERGENCE VALUE= 13.01    CRITERION= .3430
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4495E-01
HT FLOW CONVERGENCE VALUE= .4287E-01    CRITERION= .3430    <<< CONVERGED
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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 184
*** TIME = .224848E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4579E-05 OSCILLATION LIMIT = .3612
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.32 CRITERION= .3433
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4191E-01 CRITERION= .3427 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 185
*** TIME = .225637E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4761E-05 OSCILLATION LIMIT = .3756
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.01 CRITERION= .3430
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4492E-01
HT FLOW CONVERGENCE VALUE= .4281E-01 CRITERION= .3430 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 186
*** TIME = .226426E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4496E-05 OSCILLATION LIMIT = .3547
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.33 CRITERION= .3432
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4194E-01 CRITERION= .3427 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 187
*** TIME = .227215E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4661E-05 OSCILLATION LIMIT = .3677
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.00 CRITERION= .3429
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4488E-01
HT FLOW CONVERGENCE VALUE= .4275E-01 CRITERION= .3429 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 188
*** TIME = .228004E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4419E-05 OSCILLATION LIMIT = .3486
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.33 CRITERION= .3431
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4197E-01 CRITERION= .3426 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 189
*** TIME = .228793E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4570E-05 OSCILLATION LIMIT = .3606
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.00 CRITERION= .3428
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4485E-01
HT FLOW CONVERGENCE VALUE= .4270E-01 CRITERION= .3428 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 190
*** TIME = .229582E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4346E-05 OSCILLATION LIMIT = .3429
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.33 CRITERION= .3430
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4200E-01 CRITERION= .3425 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 191
*** TIME = .230371E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4487E-05 OSCILLATION LIMIT = .3540
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.00 CRITERION= .3427

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
HT FLOW CONVERGENCE VALUE= .4266E-01 CRITERION= .3427 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 192
*** TIME = .231160E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4278E-05 OSCILLATION LIMIT = .3375
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.34 CRITERION= .3430
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4202E-01 CRITERION= .3424 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 193
*** TIME = .231949E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4411E-05 OSCILLATION LIMIT = .3480
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.99 CRITERION= .3427
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4480E-01
HT FLOW CONVERGENCE VALUE= .4262E-01 CRITERION= .3426 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 194
*** TIME = .232738E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4214E-05 OSCILLATION LIMIT = .3324
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.34 CRITERION= .3429
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4204E-01 CRITERION= .3424 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 195
*** TIME = .233527E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4339E-05 OSCILLATION LIMIT = .3423
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.99 CRITERION= .3426
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4477E-01
HT FLOW CONVERGENCE VALUE= .4257E-01 CRITERION= .3426 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 196
*** TIME = .234315E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4153E-05 OSCILLATION LIMIT = .3277
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.34 CRITERION= .3428
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4206E-01 CRITERION= .3423 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 197
*** TIME = .235104E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4273E-05 OSCILLATION LIMIT = .3371
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.99 CRITERION= .3425
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4475E-01
HT FLOW CONVERGENCE VALUE= .4253E-01 CRITERION= .3425 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 198
*** TIME = .235893E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4097E-05 OSCILLATION LIMIT = .3232
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.35 CRITERION= .3427
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4207E-01 CRITERION= .3422 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 199
*** TIME = .236682E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4212E-05 OSCILLATION LIMIT = .3323
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 12.98 CRITERION= .3424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4473E-01
 HT FLOW CONVERGENCE VALUE= .4249E-01 CRITERION= .3424 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 200
 *** TIME = .237471E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4044E-05 OSCILLATION LIMIT = .3190
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.35 CRITERION= .3426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
 HT FLOW CONVERGENCE VALUE= .4208E-01 CRITERION= .3421 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 201
 *** TIME = .238260E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4154E-05 OSCILLATION LIMIT = .3277
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.98 CRITERION= .3424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4470E-01
 HT FLOW CONVERGENCE VALUE= .4245E-01 CRITERION= .3423 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 202
 *** TIME = .239049E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3994E-05 OSCILLATION LIMIT = .3151
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.35 CRITERION= .3426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
 HT FLOW CONVERGENCE VALUE= .4209E-01 CRITERION= .3421 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 203
 *** TIME = .239838E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4100E-05 OSCILLATION LIMIT = .3235
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.98 CRITERION= .3423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4468E-01
 HT FLOW CONVERGENCE VALUE= .4241E-01 CRITERION= .3422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 204
 *** TIME = .240627E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3947E-05 OSCILLATION LIMIT = .3114
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.35 CRITERION= .3425
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
 HT FLOW CONVERGENCE VALUE= .4209E-01 CRITERION= .3420 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 205
 *** TIME = .241416E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4050E-05 OSCILLATION LIMIT = .3195
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.98 CRITERION= .3422
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4466E-01
 HT FLOW CONVERGENCE VALUE= .4238E-01 CRITERION= .3422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 206
 *** TIME = .242205E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3903E-05 OSCILLATION LIMIT = .3079
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.36 CRITERION= .3424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
 HT FLOW CONVERGENCE VALUE= .4210E-01 CRITERION= .3419 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 207
 *** TIME = .242994E+08 TIME INC = 78894.0


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*** RESPONSE EIGENVALUE = .4002E-05  OSCILLATION LIMIT = .3158
*** AUTO STEP TIME: NEXT TIME INC = 78894.  UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.97  CRITERION= .3422
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4464E-01
HT FLOW CONVERGENCE VALUE= .4235E-01 CRITERION= .3421  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 29 COMPLETED.  CUM ITER = 208
*** TIME = .243783E+08  TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3861E-05  OSCILLATION LIMIT = .3046
*** AUTO STEP TIME: NEXT TIME INC = 78894.  UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.36  CRITERION= .3423
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4212E-01 CRITERION= .3418  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 30 COMPLETED.  CUM ITER = 209
*** TIME = .244572E+08  TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3958E-05  OSCILLATION LIMIT = .3122
*** AUTO STEP TIME: NEXT TIME INC = 78894.  UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.97  CRITERION= .3421
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4462E-01
HT FLOW CONVERGENCE VALUE= .4232E-01 CRITERION= .3420  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 31 COMPLETED.  CUM ITER = 210
*** TIME = .245361E+08  TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3822E-05  OSCILLATION LIMIT = .3015
*** AUTO STEP TIME: NEXT TIME INC = 78894.  UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.36  CRITERION= .3422
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4381E-01
HT FLOW CONVERGENCE VALUE= .4212E-01 CRITERION= .3418  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 32 COMPLETED.  CUM ITER = 211
*** TIME = .246150E+08  TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3916E-05  OSCILLATION LIMIT = .3089
*** AUTO STEP TIME: NEXT TIME INC = 78894.  UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.97  CRITERION= .3420
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4460E-01
HT FLOW CONVERGENCE VALUE= .4229E-01 CRITERION= .3419  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 33 COMPLETED.  CUM ITER = 212
*** TIME = .246939E+08  TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3785E-05  OSCILLATION LIMIT = .2986
*** AUTO STEP TIME: NEXT TIME INC = .13211E+06  INCREASED (FACTOR = 1.6745)

HT FLOW CONVERGENCE VALUE= 20.88  CRITERION= .3426
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7335E-01
HT FLOW CONVERGENCE VALUE= .7123E-01 CRITERION= .3417  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 34 COMPLETED.  CUM ITER = 213
*** TIME = .248260E+08  TIME INC = 132108.
*** RESPONSE EIGENVALUE = .2509E-05  OSCILLATION LIMIT = .3315
*** AUTO STEP TIME: NEXT TIME INC = .13211E+06  UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.49  CRITERION= .3423
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7409E-01
HT FLOW CONVERGENCE VALUE= .7105E-01 CRITERION= .3418  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 35 COMPLETED.  CUM ITER = 214
*** TIME = .249581E+08  TIME INC = 132108.
*** RESPONSE EIGENVALUE = .2777E-05  OSCILLATION LIMIT = .3669
*** AUTO STEP TIME: NEXT TIME INC = .13211E+06  UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.89  CRITERION= .3424
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7335E-01
HT FLOW CONVERGENCE VALUE= .7038E-01 CRITERION= .3415  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 11 SUBSTEP 36 COMPLETED. CUM ITER = 215
 *** TIME = .250902E+08 TIME INC = 132108.
 *** RESPONSE EIGENVALUE = .3249E-05 OSCILLATION LIMIT = .4292
 *** AUTO TIME STEP: NEXT TIME INC = 77967. DECREASED (FACTOR = .5902)

HT FLOW CONVERGENCE VALUE= 12.82 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4408E-01
 HT FLOW CONVERGENCE VALUE= .4125E-01 CRITERION= .3417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 37 COMPLETED. CUM ITER = 216
 *** TIME = .251681E+08 TIME INC = 77967.0
 *** RESPONSE EIGENVALUE = .4696E-05 OSCILLATION LIMIT = .3661
 *** AUTO STEP TIME: NEXT TIME INC = 77967. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.22 CRITERION= .3419
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4329E-01
 HT FLOW CONVERGENCE VALUE= .4119E-01 CRITERION= .3415 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 38 COMPLETED. CUM ITER = 217
 *** TIME = .252461E+08 TIME INC = 77967.0
 *** RESPONSE EIGENVALUE = .4509E-05 OSCILLATION LIMIT = .3515

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 16:53:59 JUN 16, 1995 CP= 11575.120
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4047E-01
 HT FLOW CONVERGENCE VALUE= .3847E-01 CRITERION= .3416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 1 COMPLETED. CUM ITER = 218
 *** TIME = .253250E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3680E-05 OSCILLATION LIMIT = .2903
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.17 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3771E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 2 COMPLETED. CUM ITER = 219
 *** TIME = .254039E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4705E-05 OSCILLATION LIMIT = .3712
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3416
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4044E-01
 HT FLOW CONVERGENCE VALUE= .3810E-01 CRITERION= .3416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 3 COMPLETED. CUM ITER = 220
 *** TIME = .254828E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4165E-05 OSCILLATION LIMIT = .3286
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.17 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3786E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 4 COMPLETED. CUM ITER = 221
 *** TIME = .255617E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4373E-05 OSCILLATION LIMIT = .3450
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4042E-01

HT FLOW CONVERGENCE VALUE= .3805E-01 CRITERION= .3415 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 222
 *** TIME = .256406E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4176E-05 OSCILLATION LIMIT = .3295
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.17 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3787E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 223
 *** TIME = .257195E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4320E-05 OSCILLATION LIMIT = .3408
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4041E-01
 HT FLOW CONVERGENCE VALUE= .3801E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 224
 *** TIME = .257984E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4145E-05 OSCILLATION LIMIT = .3270
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.17 CRITERION= .3416
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3788E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 225
 *** TIME = .258773E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4274E-05 OSCILLATION LIMIT = .3372
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4039E-01
 HT FLOW CONVERGENCE VALUE= .3798E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 226
 *** TIME = .259562E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4114E-05 OSCILLATION LIMIT = .3246
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.18 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3789E-01 CRITERION= .3411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 227
 *** TIME = .260351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4232E-05 OSCILLATION LIMIT = .3339
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4038E-01
 HT FLOW CONVERGENCE VALUE= .3795E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 228
 *** TIME = .261139E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4083E-05 OSCILLATION LIMIT = .3221
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.18 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3789E-01 CRITERION= .3410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 229
 *** TIME = .261928E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4193E-05 OSCILLATION LIMIT = .3308
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4036E-01
 HT FLOW CONVERGENCE VALUE= .3793E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 230
 *** TIME = .262717E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4053E-05 OSCILLATION LIMIT = .3198
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.18 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 231
 *** TIME = .263506E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4158E-05 OSCILLATION LIMIT = .3280
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4035E-01
 HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 232
 *** TIME = .264295E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4024E-05 OSCILLATION LIMIT = .3175
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.18 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3791E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 233
 *** TIME = .265084E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4124E-05 OSCILLATION LIMIT = .3254
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4034E-01
 HT FLOW CONVERGENCE VALUE= .3788E-01 CRITERION= .3410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 234
 *** TIME = .265873E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3996E-05 OSCILLATION LIMIT = .3153
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.19 CRITERION= .3412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3791E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 235
 *** TIME = .266662E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4092E-05 OSCILLATION LIMIT = .3229
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3410
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4033E-01
 HT FLOW CONVERGENCE VALUE= .3786E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 236
 *** TIME = .267451E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3969E-05 OSCILLATION LIMIT = .3131
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.19 CRITERION= .3411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
 HT FLOW CONVERGENCE VALUE= .3791E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 237
 *** TIME = .268240E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4062E-05 OSCILLATION LIMIT = .3205

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*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.74    CRITERION= .3409
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4032E-01
  HT FLOW CONVERGENCE VALUE= .3784E-01 CRITERION= .3409    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 21 COMPLETED.    CUM ITER = 238
*** TIME = .269029E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3943E-05    OSCILLATION LIMIT = .3111
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.19    CRITERION= .3410
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
  HT FLOW CONVERGENCE VALUE= .3791E-01 CRITERION= .3406    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 22 COMPLETED.    CUM ITER = 239
*** TIME = .269818E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4033E-05    OSCILLATION LIMIT = .3182
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.74    CRITERION= .3408
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4031E-01
  HT FLOW CONVERGENCE VALUE= .3782E-01 CRITERION= .3408    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 23 COMPLETED.    CUM ITER = 240
*** TIME = .270607E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3918E-05    OSCILLATION LIMIT = .3091
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.19    CRITERION= .3410
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
  HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3406    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 24 COMPLETED.    CUM ITER = 241
*** TIME = .271396E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4005E-05    OSCILLATION LIMIT = .3160
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.74    CRITERION= .3408
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4029E-01
  HT FLOW CONVERGENCE VALUE= .3780E-01 CRITERION= .3407    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 25 COMPLETED.    CUM ITER = 242
*** TIME = .272185E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3894E-05    OSCILLATION LIMIT = .3072
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.19    CRITERION= .3409
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
  HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3405    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 26 COMPLETED.    CUM ITER = 243
*** TIME = .272974E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3979E-05    OSCILLATION LIMIT = .3139
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.74    CRITERION= .3407
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4028E-01
  HT FLOW CONVERGENCE VALUE= .3778E-01 CRITERION= .3406    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 27 COMPLETED.    CUM ITER = 244
*** TIME = .273762E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3870E-05    OSCILLATION LIMIT = .3054
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.20    CRITERION= .3408
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
  HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3404    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 28 COMPLETED.    CUM ITER = 245

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*** TIME = .274551E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3953E-05    OSCILLATION LIMIT = .3119
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.73    CRITERION= .3406
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4027E-01
    HT FLOW CONVERGENCE VALUE= .3776E-01 CRITERION= .3406    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 29 COMPLETED.    CUM ITER = 246
*** TIME = .275340E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3848E-05    OSCILLATION LIMIT = .3036
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.20    CRITERION= .3407
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
    HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .3404    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 30 COMPLETED.    CUM ITER = 247
*** TIME = .276129E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3929E-05    OSCILLATION LIMIT = .3100
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.73    CRITERION= .3406
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4027E-01
    HT FLOW CONVERGENCE VALUE= .3774E-01 CRITERION= .3405    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 31 COMPLETED.    CUM ITER = 248
*** TIME = .276918E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3826E-05    OSCILLATION LIMIT = .3019
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.20    CRITERION= .3407
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
    HT FLOW CONVERGENCE VALUE= .3789E-01 CRITERION= .3403    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 32 COMPLETED.    CUM ITER = 249
*** TIME = .277707E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3905E-05    OSCILLATION LIMIT = .3081
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.73    CRITERION= .3405
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4026E-01
    HT FLOW CONVERGENCE VALUE= .3772E-01 CRITERION= .3404    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 33 COMPLETED.    CUM ITER = 250
*** TIME = .278496E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3805E-05    OSCILLATION LIMIT = .3002
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.20    CRITERION= .3406
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3968E-01
    HT FLOW CONVERGENCE VALUE= .3789E-01 CRITERION= .3402    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 34 COMPLETED.    CUM ITER = 251
*** TIME = .279285E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3883E-05    OSCILLATION LIMIT = .3063
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.73    CRITERION= .3404
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4025E-01
    HT FLOW CONVERGENCE VALUE= .3771E-01 CRITERION= .3403    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 35 COMPLETED.    CUM ITER = 252
*** TIME = .280074E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3785E-05    OSCILLATION LIMIT = .2986
*** AUTO STEP TIME: NEXT TIME INC = .13209E+06 INCREASED (FACTOR = 1.6742)

    HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .3409
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6644E-01
    HT FLOW CONVERGENCE VALUE= .6394E-01 CRITERION= .3401    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 36 COMPLETED. CUM ITER = 253
*** TIME = .281395E+08 TIME INC = 132087.
*** RESPONSE EIGENVALUE = .2648E-05 OSCILLATION LIMIT = .3497
*** AUTO STEP TIME: NEXT TIME INC = .13209E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.44 CRITERION= .3407
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6699E-01
HT FLOW CONVERGENCE VALUE= .6345E-01 CRITERION= .3402 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 37 COMPLETED. CUM ITER = 254
*** TIME = .282716E+08 TIME INC = 132087.
*** RESPONSE EIGENVALUE = .2932E-05 OSCILLATION LIMIT = .3873
*** AUTO TIME STEP: NEXT TIME INC = .13030E+06 DECREASED (FACTOR = .9864)

HT FLOW CONVERGENCE VALUE= 18.65 CRITERION= .3407
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6554E-01
HT FLOW CONVERGENCE VALUE= .6230E-01 CRITERION= .3400 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 38 COMPLETED. CUM ITER = 255
*** TIME = .284019E+08 TIME INC = 130296.
*** RESPONSE EIGENVALUE = .3449E-05 OSCILLATION LIMIT = .4494
Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM FROM .31558E+08 TO .28402E+09 BY .31558E+08
TIME= .31558E+08

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6169.91289 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 123.63 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 124.68 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 127.28 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 13664.330 TIME= 17:30:32
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution)

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procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 17:30:32 JUN 16, 1995 CP= 13664.330
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
 TIME AT END OF THE LOAD STEP.31558E+08
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 10
 MAXIMUM NUMBER OF SUBSTEPS 40
 MINIMUM NUMBER OF SUBSTEPS 5
 START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
 STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS
 THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 17.80 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6135E-01
 HT FLOW CONVERGENCE VALUE= .5775E-01 CRITERION= .3401 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 256
 *** TIME = .285322E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3277E-05 OSCILLATION LIMIT = .4270
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.27 CRITERION= .3405
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5742E-01 CRITERION= .3399 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 257
 *** TIME = .286625E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3784E-05 OSCILLATION LIMIT = .4931
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6133E-01
 HT FLOW CONVERGENCE VALUE= .5759E-01 CRITERION= .3400 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 258
 *** TIME = .287928E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3376E-05 OSCILLATION LIMIT = .4399
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.27 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5755E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 259
 *** TIME = .289231E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3580E-05 OSCILLATION LIMIT = .4664
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6133E-01
 HT FLOW CONVERGENCE VALUE= .5748E-01 CRITERION= .3398 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 260
 *** TIME = .290534E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3456E-05 OSCILLATION LIMIT = .4503
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.27 CRITERION= .3403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5754E-01 CRITERION= .3396 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 261
 *** TIME = .291836E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3537E-05 OSCILLATION LIMIT = .4608
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3401
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6132E-01
 HT FLOW CONVERGENCE VALUE= .5742E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 262
 *** TIME = .293139E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3463E-05 OSCILLATION LIMIT = .4512
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.27 CRITERION= .3402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5752E-01 CRITERION= .3395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 8 COMPLETED. CUM ITER = 263
 *** TIME = .294442E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3523E-05 OSCILLATION LIMIT = .4591
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3400
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6132E-01
 HT FLOW CONVERGENCE VALUE= .5738E-01 CRITERION= .3396 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 9 COMPLETED. CUM ITER = 264
 *** TIME = .295745E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3459E-05 OSCILLATION LIMIT = .4507
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3400
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5750E-01 CRITERION= .3394 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 10 COMPLETED. CUM ITER = 265
 *** TIME = .297048E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3514E-05 OSCILLATION LIMIT = .4578
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6131E-01
 HT FLOW CONVERGENCE VALUE= .5734E-01 CRITERION= .3395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 11 COMPLETED. CUM ITER = 266
 *** TIME = .298351E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3454E-05 OSCILLATION LIMIT = .4500
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3399
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5747E-01 CRITERION= .3393 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 12 COMPLETED. CUM ITER = 267
 *** TIME = .299654E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3505E-05 OSCILLATION LIMIT = .4567

*** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3397
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6131E-01
 HT FLOW CONVERGENCE VALUE= .5731E-01 CRITERION= .3394 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 13 COMPLETED. CUM ITER = 268
 *** TIME = .300957E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3448E-05 OSCILLATION LIMIT = .4493
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5746E-01 CRITERION= .3391 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 14 COMPLETED. CUM ITER = 269
 *** TIME = .302260E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3497E-05 OSCILLATION LIMIT = .4557
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6130E-01
 HT FLOW CONVERGENCE VALUE= .5728E-01 CRITERION= .3392 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 15 COMPLETED. CUM ITER = 270
 *** TIME = .303563E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3442E-05 OSCILLATION LIMIT = .4485
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3397
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5744E-01 CRITERION= .3390 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 271
 *** TIME = .304866E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3489E-05 OSCILLATION LIMIT = .4547
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6130E-01
 HT FLOW CONVERGENCE VALUE= .5725E-01 CRITERION= .3391 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 272
 *** TIME = .306169E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3436E-05 OSCILLATION LIMIT = .4477
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5742E-01 CRITERION= .3389 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 18 COMPLETED. CUM ITER = 273
 *** TIME = .307472E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3482E-05 OSCILLATION LIMIT = .4537
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.79 CRITERION= .3394
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6129E-01
 HT FLOW CONVERGENCE VALUE= .5722E-01 CRITERION= .3390 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 19 COMPLETED. CUM ITER = 274
 *** TIME = .308775E+08 TIME INC = 130296.
 *** RESPONSE EIGENVALUE = .3431E-05 OSCILLATION LIMIT = .4470
 *** AUTO STEP TIME: NEXT TIME INC = .13030E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.28 CRITERION= .3394
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
 HT FLOW CONVERGENCE VALUE= .5740E-01 CRITERION= .3388 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 20 COMPLETED. CUM ITER = 275

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*** TIME = .310078E+08    TIME INC = 130296.
*** RESPONSE EIGENVALUE = .3475E-05    OSCILLATION LIMIT = .4528
*** AUTO STEP TIME: NEXT TIME INC = .13030E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.78    CRITERION= .3392
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6129E-01
    HT FLOW CONVERGENCE VALUE= .5719E-01    CRITERION= .3389    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 21 COMPLETED. CUM ITER = 276
*** TIME = .311381E+08    TIME INC = 130296.
*** RESPONSE EIGENVALUE = .3425E-05    OSCILLATION LIMIT = .4462
*** AUTO STEP TIME: NEXT TIME INC = .13030E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.28    CRITERION= .3393
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6083E-01
    HT FLOW CONVERGENCE VALUE= .5737E-01    CRITERION= .3387    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 22 COMPLETED. CUM ITER = 277
*** TIME = .312684E+08    TIME INC = 130296.
*** RESPONSE EIGENVALUE = .3468E-05    OSCILLATION LIMIT = .4518
*** AUTO STEP TIME: NEXT TIME INC = .13030E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.78    CRITERION= .3391
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6128E-01
    HT FLOW CONVERGENCE VALUE= .5716E-01    CRITERION= .3387    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 23 COMPLETED. CUM ITER = 278
*** TIME = .313987E+08    TIME INC = 130296.
*** RESPONSE EIGENVALUE = .3419E-05    OSCILLATION LIMIT = .4454
*** AUTO TIME STEP: NEXT TIME INC = 79479.    DECREASED (FACTOR = .6100)

    HT FLOW CONVERGENCE VALUE= 10.46    CRITERION= .3389
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3711E-01
    HT FLOW CONVERGENCE VALUE= .3462E-01    CRITERION= .3386    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 24 COMPLETED. CUM ITER = 279
*** TIME = .314782E+08    TIME INC = 79478.7
*** RESPONSE EIGENVALUE = .5088E-05    OSCILLATION LIMIT = .4044
*** AUTO STEP TIME: NEXT TIME INC = 79479.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 10.96    CRITERION= .3387
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3757E-01
    HT FLOW CONVERGENCE VALUE= .3451E-01    CRITERION= .3387    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 280
*** TIME = .315576E+08    TIME INC = 79478.7
*** RESPONSE EIGENVALUE = .4573E-05    OSCILLATION LIMIT = .3634

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303    VERSION=HP 9000/7XX    17:54:20 JUN 16, 1995 CP= 15044.720
FOR SUPPORT CALL ROBERT BAHNEY    PHONE (702) 794-5337    FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 75.31    CRITERION= .3469
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
    HT FLOW CONVERGENCE VALUE= .2508    CRITERION= .3383    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 281
*** TIME = .323466E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2176E-05    OSCILLATION LIMIT = 1.716
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 75.79    CRITERION= .3466

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2420 CRITERION= .3381 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 282
 *** TIME = .331355E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4416E-05 OSCILLATION LIMIT = 3.484
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3464
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2432 CRITERION= .3376 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 283
 *** TIME = .339245E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3988E-05 OSCILLATION LIMIT = 3.147
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2416 CRITERION= .3374 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 284
 *** TIME = .347134E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4175E-05 OSCILLATION LIMIT = 3.293
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2425 CRITERION= .3370 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 285
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4010E-05 OSCILLATION LIMIT = 3.163
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2411 CRITERION= .3368 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 286
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4140E-05 OSCILLATION LIMIT = 3.266
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2420 CRITERION= .3364 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 287
 *** TIME = .370802E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4015E-05 OSCILLATION LIMIT = 3.168
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3447
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2407 CRITERION= .3362 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 288
 *** TIME = .378692E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4111E-05 OSCILLATION LIMIT = 3.243
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2414 CRITERION= .3357 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 289
 *** TIME = .386581E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4015E-05 OSCILLATION LIMIT = 3.168
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3441
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2402 CRITERION= .3355 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 290
 *** TIME = .394470E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4086E-05 OSCILLATION LIMIT = 3.223
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2408 CRITERION= .3351 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 291
 *** TIME = .402360E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4012E-05 OSCILLATION LIMIT = 3.166
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3435
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2396 CRITERION= .3349 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 292
 *** TIME = .410249E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4063E-05 OSCILLATION LIMIT = 3.206
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2402 CRITERION= .3344 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 293
 *** TIME = .418139E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4007E-05 OSCILLATION LIMIT = 3.162
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3429
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2391 CRITERION= .3343 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 294
 *** TIME = .426028E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4044E-05 OSCILLATION LIMIT = 3.191
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2396 CRITERION= .3338 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 295
 *** TIME = .433917E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4001E-05 OSCILLATION LIMIT = 3.156
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2386 CRITERION= .3336 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 296
 *** TIME = .441807E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4026E-05 OSCILLATION LIMIT = 3.177
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2391 CRITERION= .3332 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 297
 *** TIME = .449696E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .3993E-05 OSCILLATION LIMIT = 3.150
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3416
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2381 CRITERION= .3330 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 298
 *** TIME = .457586E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4010E-05 OSCILLATION LIMIT = 3.164
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2385 CRITERION= .3325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 299
 *** TIME = .465475E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3984E-05 OSCILLATION LIMIT = 3.143
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3410
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2375 CRITERION= .3324 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 300
 *** TIME = .473364E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3995E-05 OSCILLATION LIMIT = 3.151
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2379 CRITERION= .3319 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 301
 *** TIME = .481254E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3974E-05 OSCILLATION LIMIT = 3.135
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2369 CRITERION= .3317 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 302
 *** TIME = .489143E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3981E-05 OSCILLATION LIMIT = 3.141
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2373 CRITERION= .3313 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 303
 *** TIME = .497033E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3964E-05 OSCILLATION LIMIT = 3.127
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2364 CRITERION= .3311 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 304
 *** TIME = .504922E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3967E-05 OSCILLATION LIMIT = 3.129
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2367 CRITERION= .3306 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 305
 *** TIME = .512811E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3953E-05 OSCILLATION LIMIT = 3.119
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3392
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2358 CRITERION= .3305 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 306
 *** TIME = .520701E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3953E-05 OSCILLATION LIMIT = 3.119
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3389
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2361 CRITERION= .3300 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 307
 *** TIME = .528590E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3942E-05 OSCILLATION LIMIT = 3.110
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3386
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2352 CRITERION= .3298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 308
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3940E-05 OSCILLATION LIMIT = 3.108
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3383
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2355 CRITERION= .3294 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 309
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3931E-05 OSCILLATION LIMIT = 3.101
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3379
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2346 CRITERION= .3292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 310
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3927E-05 OSCILLATION LIMIT = 3.098
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3377
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2349 CRITERION= .3287 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 311
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3920E-05 OSCILLATION LIMIT = 3.092
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3373
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2340 CRITERION= .3286 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 312
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3914E-05 OSCILLATION LIMIT = 3.088
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631

HT FLOW CONVERGENCE VALUE= .2343 CRITERION= .3281 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 313
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3908E-05 OSCILLATION LIMIT = 3.083
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3367
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2334 CRITERION= .3279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 314
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3902E-05 OSCILLATION LIMIT = 3.078
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2337 CRITERION= .3275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 315
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3896E-05 OSCILLATION LIMIT = 3.073
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2328 CRITERION= .3273 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 316
 *** TIME = .599595E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3889E-05 OSCILLATION LIMIT = 3.068
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3359
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2331 CRITERION= .3269 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 317
 *** TIME = .607484E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3884E-05 OSCILLATION LIMIT = 3.064
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2322 CRITERION= .3267 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 318
 *** TIME = .615374E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-05 OSCILLATION LIMIT = 3.058
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.31 CRITERION= .3352
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2326 CRITERION= .3262 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 39 COMPLETED. CUM ITER = 319
 *** TIME = .623263E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3872E-05 OSCILLATION LIMIT = 3.055
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.79 CRITERION= .3349
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2631
 HT FLOW CONVERGENCE VALUE= .2317 CRITERION= .3260 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 40 COMPLETED. CUM ITER = 320
 *** TIME = .631152E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3863E-05 OSCILLATION LIMIT = 3.048

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION: IP 9000/7XX 18:32:56 JUN 16, 1995 CP= 17249.480
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3297
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1481 CRITERION= .3257 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 1 COMPLETED. CUM ITER = 321
 *** TIME = .639042E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6929E-05 OSCILLATION LIMIT = 5.466
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3294
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1472 CRITERION= .3255 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 2 COMPLETED. CUM ITER = 322
 *** TIME = .646931E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6514E-05 OSCILLATION LIMIT = 5.139
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3292
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1498 CRITERION= .3251 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 3 COMPLETED. CUM ITER = 323
 *** TIME = .654821E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5271E-05 OSCILLATION LIMIT = 4.159
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3289
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1471 CRITERION= .3249 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 4 COMPLETED. CUM ITER = 324
 *** TIME = .662710E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6460E-05 OSCILLATION LIMIT = 5.097
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3287
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1493 CRITERION= .3246 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 325
 *** TIME = .670599E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5399E-05 OSCILLATION LIMIT = 4.260
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3284
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1470 CRITERION= .3244 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 326
 *** TIME = .678489E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6308E-05 OSCILLATION LIMIT = 4.976
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1488 CRITERION= .3240 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 327
 *** TIME = .686378E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5501E-05 OSCILLATION LIMIT = 4.340

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3278
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1468 CRITERION= .3239 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 328

*** TIME = .694268E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6191E-05 OSCILLATION LIMIT = 4.884

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3276
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1484 CRITERION= .3235 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 329

*** TIME = .702157E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5576E-05 OSCILLATION LIMIT = 4.399

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3273
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1466 CRITERION= .3233 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 330

*** TIME = .710046E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6101E-05 OSCILLATION LIMIT = 4.813

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3271
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1480 CRITERION= .3230 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 331

*** TIME = .717936E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5630E-05 OSCILLATION LIMIT = 4.442

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3268
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1464 CRITERION= .3228 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 332

*** TIME = .725825E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6030E-05 OSCILLATION LIMIT = 4.757

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3266
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1476 CRITERION= .3224 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 333

*** TIME = .733715E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5668E-05 OSCILLATION LIMIT = 4.472

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3262
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1462 CRITERION= .3223 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 334

*** TIME = .741604E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5973E-05 OSCILLATION LIMIT = 4.712

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3260
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1473 CRITERION= .3219 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 335

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*** TIME = .749493E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5694E-05    OSCILLATION LIMIT = 4.492
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.86    CRITERION= .3257
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1460    CRITERION= .3217    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 336
*** TIME = .757383E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5928E-05    OSCILLATION LIMIT = 4.677
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.39    CRITERION= .3255
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1469    CRITERION= .3214    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 337
*** TIME = .765272E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5712E-05    OSCILLATION LIMIT = 4.507
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.86    CRITERION= .3252
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1457    CRITERION= .3212    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 338
*** TIME = .773162E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5891E-05    OSCILLATION LIMIT = 4.648
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.39    CRITERION= .3250
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1466    CRITERION= .3208    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 339
*** TIME = .781051E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5723E-05    OSCILLATION LIMIT = 4.515
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.86    CRITERION= .3246
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1454    CRITERION= .3207    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 340
*** TIME = .788940E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5861E-05    OSCILLATION LIMIT = 4.624
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.39    CRITERION= .3244
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1463    CRITERION= .3203    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 341
*** TIME = .796830E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5729E-05    OSCILLATION LIMIT = 4.520
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.86    CRITERION= .3241
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1455    CRITERION= .3201    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 342
*** TIME = .804719E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5836E-05    OSCILLATION LIMIT = 4.604
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.39    CRITERION= .3239
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
    HT FLOW CONVERGENCE VALUE= .1465    CRITERION= .3198    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 343
*** TIME = .812609E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5730E-05 OSCILLATION LIMIT = 4.520
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3236
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1454 CRITERION= .3196 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 344
*** TIME = .820498E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5812E-05 OSCILLATION LIMIT = 4.585
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3234
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1462 CRITERION= .3192 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 345
*** TIME = .828387E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5728E-05 OSCILLATION LIMIT = 4.519
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3231
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1451 CRITERION= .3191 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 346
*** TIME = .836277E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5792E-05 OSCILLATION LIMIT = 4.570
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3229
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1459 CRITERION= .3187 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 347
*** TIME = .844166E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5724E-05 OSCILLATION LIMIT = 4.516
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3225
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1450 CRITERION= .3185 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 348
*** TIME = .852056E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5775E-05 OSCILLATION LIMIT = 4.556
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3223
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1461 CRITERION= .3181 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 349
*** TIME = .859945E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5719E-05 OSCILLATION LIMIT = 4.512
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3220
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
HT FLOW CONVERGENCE VALUE= .1451 CRITERION= .3180 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 350
*** TIME = .867834E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5758E-05 OSCILLATION LIMIT = 4.543
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3218

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1458 CRITERION= .3176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 351
 *** TIME = .875724E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5712E-05 OSCILLATION LIMIT = 4.506
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1448 CRITERION= .3174 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 352
 *** TIME = .883613E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5743E-05 OSCILLATION LIMIT = 4.531
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3213
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1455 CRITERION= .3171 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 353
 *** TIME = .891503E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5704E-05 OSCILLATION LIMIT = 4.500
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3209
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1445 CRITERION= .3169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 354
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5729E-05 OSCILLATION LIMIT = 4.520
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1467 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 355
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5696E-05 OSCILLATION LIMIT = 4.494
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3204
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1459 CRITERION= .3164 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 356
 *** TIME = .915171E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5715E-05 OSCILLATION LIMIT = 4.509
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3202
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1468 CRITERION= .3160 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 357
 *** TIME = .923060E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5685E-05 OSCILLATION LIMIT = 4.486
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1458 CRITERION= .3158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 38 COMPLETED. CUM ITER = 358
 *** TIME = .930950E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5702E-05 OSCILLATION LIMIT = 4.498
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.39 CRITERION= .3197
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1465 CRITERION= .3155 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 39 COMPLETED. CUM ITER = 359
 *** TIME = .938839E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5676E-05 OSCILLATION LIMIT = 4.478
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.86 CRITERION= .3194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732
 HT FLOW CONVERGENCE VALUE= .1457 CRITERION= .3153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 40 COMPLETED. CUM ITER = 360
 *** TIME = .946728E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5689E-05 OSCILLATION LIMIT = 4.488

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:11:36 JUN 16, 1995 CP= 19456.030
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1147 CRITERION= .3150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 1 COMPLETED. CUM ITER = 361
 *** TIME = .954618E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7322E-05 OSCILLATION LIMIT = 5.776
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.41 CRITERION= .3174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1142 CRITERION= .3148 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 2 COMPLETED. CUM ITER = 362
 *** TIME = .962507E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7141E-05 OSCILLATION LIMIT = 5.634
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3172
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1156 CRITERION= .3145 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 3 COMPLETED. CUM ITER = 363
 *** TIME = .970397E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6507E-05 OSCILLATION LIMIT = 5.133
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.41 CRITERION= .3169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1141 CRITERION= .3144 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 364
 *** TIME = .978286E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7111E-05 OSCILLATION LIMIT = 5.610
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3168
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1154 CRITERION= .3140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 365
 *** TIME = .986175E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6567E-05 OSCILLATION LIMIT = 5.181
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.41 CRITERION= .3165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3139 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 366
 *** TIME = .994065E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7034E-05 OSCILLATION LIMIT = 5.549
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3163
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1151 CRITERION= .3136 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 367
 *** TIME = .100195E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6614E-05 OSCILLATION LIMIT = 5.218
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.41 CRITERION= .3160
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 368
 *** TIME = .100984E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6973E-05 OSCILLATION LIMIT = 5.501
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3158
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1153 CRITERION= .3131 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 369
 *** TIME = .101773E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6646E-05 OSCILLATION LIMIT = 5.244
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1141 CRITERION= .3130 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 370
 *** TIME = .102562E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6923E-05 OSCILLATION LIMIT = 5.462
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1152 CRITERION= .3126 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 371
 *** TIME = .103351E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6668E-05 OSCILLATION LIMIT = 5.261
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1142 CRITERION= .3125 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 372
 *** TIME = .104140E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6883E-05 OSCILLATION LIMIT = 5.430
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3149
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1151 CRITERION= .3122 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 373
 *** TIME = .104929E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6682E-05 OSCILLATION LIMIT = 5.272
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3146
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3120 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 374
 *** TIME = .105718E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6850E-05 OSCILLATION LIMIT = 5.404
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3144
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1149 CRITERION= .3117 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 375
 *** TIME = .106507E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6691E-05 OSCILLATION LIMIT = 5.279
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3141
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1138 CRITERION= .3116 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 376
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6823E-05 OSCILLATION LIMIT = 5.383
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1147 CRITERION= .3112 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 377
 *** TIME = .108085E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6696E-05 OSCILLATION LIMIT = 5.283
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1137 CRITERION= .3111 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 378
 *** TIME = .108874E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6800E-05 OSCILLATION LIMIT = 5.365
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1146 CRITERION= .3108 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 379
 *** TIME = .109663E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6697E-05 OSCILLATION LIMIT = 5.284
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3132
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1136 CRITERION= .3106 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 380
 *** TIME = .110452E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6780E-05 OSCILLATION LIMIT = 5.349
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368

HT FLOW CONVERGENCE VALUE= .1145 CRITERION= .3103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 381
 *** TIME = .111241E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6696E-05 OSCILLATION LIMIT = 5.282
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3127
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1135 CRITERION= .3101 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 382
 *** TIME = .112030E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6763E-05 OSCILLATION LIMIT = 5.336
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3126
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1142 CRITERION= .3098 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 383
 *** TIME = .112818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6693E-05 OSCILLATION LIMIT = 5.280
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3123
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1133 CRITERION= .3097 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 384
 *** TIME = .113607E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6747E-05 OSCILLATION LIMIT = 5.323
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3121
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3093 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 25 COMPLETED. CUM ITER = 385
 *** TIME = .114396E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6688E-05 OSCILLATION LIMIT = 5.276
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1131 CRITERION= .3092 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 26 COMPLETED. CUM ITER = 386
 *** TIME = .115185E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6732E-05 OSCILLATION LIMIT = 5.311
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3117
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1139 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 27 COMPLETED. CUM ITER = 387
 *** TIME = .115974E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6681E-05 OSCILLATION LIMIT = 5.271
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3114
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1131 CRITERION= .3087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 28 COMPLETED. CUM ITER = 388
 *** TIME = .116763E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6718E-05 OSCILLATION LIMIT = 5.300
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3112
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1138 CRITERION= .3084 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 29 COMPLETED. CUM ITER = 389
 *** TIME = .117552E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6674E-05 OSCILLATION LIMIT = 5.265
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3109
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .3083 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 30 COMPLETED. CUM ITER = 390
 *** TIME = .118341E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6705E-05 OSCILLATION LIMIT = 5.290
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3107
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1137 CRITERION= .3079 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 31 COMPLETED. CUM ITER = 391
 *** TIME = .119130E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6665E-05 OSCILLATION LIMIT = 5.258
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3104
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1128 CRITERION= .3078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 392
 *** TIME = .119919E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6691E-05 OSCILLATION LIMIT = 5.279
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3103
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1135 CRITERION= .3075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 393
 *** TIME = .120708E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6656E-05 OSCILLATION LIMIT = 5.251
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3100
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1127 CRITERION= .3073 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 394
 *** TIME = .121497E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6679E-05 OSCILLATION LIMIT = 5.269
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3098
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1134 CRITERION= .3070 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 395
 *** TIME = .122286E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6647E-05 OSCILLATION LIMIT = 5.244
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3095
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
 HT FLOW CONVERGENCE VALUE= .1126 CRITERION= .3069 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 396
 *** TIME = .123075E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6666E-05 OSCILLATION LIMIT = 5.259

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3093
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
HT FLOW CONVERGENCE VALUE= .1133 CRITERION= .3065 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 397
*** TIME = .123864E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6638E-05 OSCILLATION LIMIT = 5.237
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3090
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
HT FLOW CONVERGENCE VALUE= .1124 CRITERION= .3064 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 398
*** TIME = .124653E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6655E-05 OSCILLATION LIMIT = 5.250
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 38.95 CRITERION= .3089
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
HT FLOW CONVERGENCE VALUE= .1131 CRITERION= .3061 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 399
*** TIME = .125441E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6629E-05 OSCILLATION LIMIT = 5.230
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 39.40 CRITERION= .3086
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1368
HT FLOW CONVERGENCE VALUE= .1124 CRITERION= .3059 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 400
*** TIME = .126230E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6644E-05 OSCILLATION LIMIT = 5.241
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 19:48:39 JUN 16, 1995 CP= 21644.270
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3077
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9556E-01 CRITERION= .3056 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 401
*** TIME = .127019E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7158E-05 OSCILLATION LIMIT = 5.647
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 33.44 CRITERION= .3074
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9482E-01 CRITERION= .3055 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 402
*** TIME = .127808E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7021E-05 OSCILLATION LIMIT = 5.539
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3073
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9583E-01 CRITERION= .3052 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 403
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*** TIME = .128597E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6682E-05    OSCILLATION LIMIT = 5.272
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.44    CRITERION= .3070
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9476E-01    CRITERION= .3051    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 404
*** TIME = .129386E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7006E-05    OSCILLATION LIMIT = 5.527
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.98    CRITERION= .3069
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9569E-01    CRITERION= .3048    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 405
*** TIME = .130175E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6709E-05    OSCILLATION LIMIT = 5.293
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.44    CRITERION= .3066
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9469E-01    CRITERION= .3047    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 406
*** TIME = .130964E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6962E-05    OSCILLATION LIMIT = 5.493
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.98    CRITERION= .3065
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9557E-01    CRITERION= .3044    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 407
*** TIME = .131753E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6729E-05    OSCILLATION LIMIT = 5.309
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.44    CRITERION= .3062
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9456E-01    CRITERION= .3043    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 408
*** TIME = .132542E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6926E-05    OSCILLATION LIMIT = 5.464
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.98    CRITERION= .3061
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9538E-01    CRITERION= .3040    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 409
*** TIME = .133331E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6743E-05    OSCILLATION LIMIT = 5.320
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.43    CRITERION= .3058
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9442E-01    CRITERION= .3039    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 410
*** TIME = .134120E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6897E-05    OSCILLATION LIMIT = 5.441
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.98    CRITERION= .3057
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
    HT FLOW CONVERGENCE VALUE= .9520E-01    CRITERION= .3036    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 411
*** TIME = .134909E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6751E-05 OSCILLATION LIMIT = 5.326
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3054
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9427E-01 CRITERION= .3035 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 412
*** TIME = .135698E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6873E-05 OSCILLATION LIMIT = 5.422
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3053
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9502E-01 CRITERION= .3032 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 413
*** TIME = .136487E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6755E-05 OSCILLATION LIMIT = 5.329
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3050
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9411E-01 CRITERION= .3031 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 414
*** TIME = .137276E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6852E-05 OSCILLATION LIMIT = 5.406
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3049
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9485E-01 CRITERION= .3028 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 415
*** TIME = .138065E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6756E-05 OSCILLATION LIMIT = 5.330
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3046
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9396E-01 CRITERION= .3027 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 416
*** TIME = .138853E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6835E-05 OSCILLATION LIMIT = 5.392
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3045
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9469E-01 CRITERION= .3024 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 417
*** TIME = .139642E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6755E-05 OSCILLATION LIMIT = 5.329
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3042
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
HT FLOW CONVERGENCE VALUE= .9382E-01 CRITERION= .3023 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 418
*** TIME = .140431E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6819E-05 OSCILLATION LIMIT = 5.380
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3041

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9451E-01 CRITERION= .3020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 419
 *** TIME = .141220E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6752E-05 OSCILLATION LIMIT = 5.327
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9366E-01 CRITERION= .3019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 420
 *** TIME = .142009E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6805E-05 OSCILLATION LIMIT = 5.369
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9435E-01 CRITERION= .3016 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 421
 *** TIME = .142798E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6748E-05 OSCILLATION LIMIT = 5.324
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3034
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9351E-01 CRITERION= .3015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 422
 *** TIME = .143587E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6793E-05 OSCILLATION LIMIT = 5.359
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9419E-01 CRITERION= .3012 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 423
 *** TIME = .144376E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6743E-05 OSCILLATION LIMIT = 5.320
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9337E-01 CRITERION= .3011 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 424
 *** TIME = .145165E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6782E-05 OSCILLATION LIMIT = 5.350
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3029
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9403E-01 CRITERION= .3008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 425
 *** TIME = .145954E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6738E-05 OSCILLATION LIMIT = 5.316
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9322E-01 CRITERION= .3007 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 426
 *** TIME = .146743E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6770E-05 OSCILLATION LIMIT = 5.341
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9388E-01 CRITERION= .3004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 427
 *** TIME = .147532E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6732E-05 OSCILLATION LIMIT = 5.311
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.43 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9307E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 428
 *** TIME = .148321E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6760E-05 OSCILLATION LIMIT = 5.334
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3021
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9371E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 429
 *** TIME = .149110E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6725E-05 OSCILLATION LIMIT = 5.306
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .3018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9288E-01 CRITERION= .2999 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 430
 *** TIME = .149899E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6751E-05 OSCILLATION LIMIT = 5.326
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9339E-01 CRITERION= .2996 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 431
 *** TIME = .150688E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6719E-05 OSCILLATION LIMIT = 5.301
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .3014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9255E-01 CRITERION= .2995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 432
 *** TIME = .151477E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6740E-05 OSCILLATION LIMIT = 5.318
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3013
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9319E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 433
 *** TIME = .152265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6710E-05 OSCILLATION LIMIT = 5.293
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .3010
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9240E-01 CRITERION= .2991 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 434
 *** TIME = .153054E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6730E-05 OSCILLATION LIMIT = 5.310
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9303E-01 CRITERION= .2988 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 435
 *** TIME = .153843E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6702E-05 OSCILLATION LIMIT = 5.288
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .3006
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9224E-01 CRITERION= .2987 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 436
 *** TIME = .154632E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6721E-05 OSCILLATION LIMIT = 5.303
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9286E-01 CRITERION= .2984 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 437
 *** TIME = .155421E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6695E-05 OSCILLATION LIMIT = 5.282
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .3002
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9207E-01 CRITERION= .2983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 438
 *** TIME = .156210E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6713E-05 OSCILLATION LIMIT = 5.296
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3001
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9268E-01 CRITERION= .2980 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 439
 *** TIME = .156999E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6687E-05 OSCILLATION LIMIT = 5.276
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.42 CRITERION= .2998
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .9192E-01 CRITERION= .2979 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 440
 *** TIME = .157788E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6704E-05 OSCILLATION LIMIT = 5.289

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:25:41 JUN 16, 1995 CP= 23831.000
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 27.80 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7646E-01 CRITERION= .2976 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 441
 *** TIME = .158577E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9844E-05 OSCILLATION LIMIT = 7.766
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7556E-01 CRITERION= .2975 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 442
 *** TIME = .159366E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9884E-05 OSCILLATION LIMIT = 7.798
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.80 CRITERION= .2987
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7657E-01 CRITERION= .2972 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 443
 *** TIME = .160155E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9132E-05 OSCILLATION LIMIT = 7.205
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2985
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7545E-01 CRITERION= .2970 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 444
 *** TIME = .160944E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9832E-05 OSCILLATION LIMIT = 7.757
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7640E-01 CRITERION= .2967 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 445
 *** TIME = .161733E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9203E-05 OSCILLATION LIMIT = 7.261
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7537E-01 CRITERION= .2966 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 446
 *** TIME = .162522E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9749E-05 OSCILLATION LIMIT = 7.691
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2979
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7625E-01 CRITERION= .2963 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 447
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9256E-05 OSCILLATION LIMIT = 7.303
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2977
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7486E-01 CRITERION= .2962 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 448
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9683E-05 OSCILLATION LIMIT = 7.639
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01

HT FLOW CONVERGENCE VALUE= .7549E-01 CRITERION= .2959 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 449
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9293E-05 OSCILLATION LIMIT = 7.331
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2972
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7428E-01 CRITERION= .2958 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 450
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9628E-05 OSCILLATION LIMIT = 7.596
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2971
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7502E-01 CRITERION= .2955 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 451
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9315E-05 OSCILLATION LIMIT = 7.349
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2968
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7415E-01 CRITERION= .2954 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 452
 *** TIME = .167255E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9580E-05 OSCILLATION LIMIT = 7.558
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2967
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7487E-01 CRITERION= .2951 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 453
 *** TIME = .168044E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9333E-05 OSCILLATION LIMIT = 7.363
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.24 CRITERION= .2964
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7404E-01 CRITERION= .2950 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 454
 *** TIME = .168833E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9547E-05 OSCILLATION LIMIT = 7.532
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2963
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7473E-01 CRITERION= .2947 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 455
 *** TIME = .169622E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9345E-05 OSCILLATION LIMIT = 7.373
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7392E-01 CRITERION= .2946 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 456
 *** TIME = .170411E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9518E-05 OSCILLATION LIMIT = 7.509
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2959
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7460E-01 CRITERION= .2943 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 457
 *** TIME = .171200E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9353E-05 OSCILLATION LIMIT = 7.379
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2956
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7381E-01 CRITERION= .2942 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 458
 *** TIME = .171989E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9495E-05 OSCILLATION LIMIT = 7.491
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7435E-01 CRITERION= .2939 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 459
 *** TIME = .172778E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9356E-05 OSCILLATION LIMIT = 7.381
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2952
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7353E-01 CRITERION= .2938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 460
 *** TIME = .173567E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9473E-05 OSCILLATION LIMIT = 7.474
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2951
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7417E-01 CRITERION= .2935 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 461
 *** TIME = .174356E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9354E-05 OSCILLATION LIMIT = 7.379
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2948
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7341E-01 CRITERION= .2933 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 462
 *** TIME = .175145E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9454E-05 OSCILLATION LIMIT = 7.459
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7403E-01 CRITERION= .2930 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 463
 *** TIME = .175934E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9352E-05 OSCILLATION LIMIT = 7.378
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2944
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7329E-01 CRITERION= .2929 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 464
 *** TIME = .176723E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9439E-05 OSCILLATION LIMIT = 7.447

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2943
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7391E-01 CRITERION= .2926 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 465
 *** TIME = .177512E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9349E-05 OSCILLATION LIMIT = 7.376
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2940
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7316E-01 CRITERION= .2925 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 466
 *** TIME = .178300E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9425E-05 OSCILLATION LIMIT = 7.436
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7377E-01 CRITERION= .2922 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 467
 *** TIME = .179089E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9345E-05 OSCILLATION LIMIT = 7.372
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2936
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7299E-01 CRITERION= .2921 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 468
 *** TIME = .179878E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9411E-05 OSCILLATION LIMIT = 7.425
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7242E-01 CRITERION= .2918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 469
 *** TIME = .180667E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9338E-05 OSCILLATION LIMIT = 7.367
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7165E-01 CRITERION= .2917 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 470
 *** TIME = .181456E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9392E-05 OSCILLATION LIMIT = 7.410
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.79 CRITERION= .2930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7223E-01 CRITERION= .2914 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 471
 *** TIME = .182245E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9324E-05 OSCILLATION LIMIT = 7.356
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 28.23 CRITERION= .2927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
 HT FLOW CONVERGENCE VALUE= .7154E-01 CRITERION= .2913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 472

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*** TIME = .183034E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9380E-05    OSCILLATION LIMIT = 7.401
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.78    CRITERION= .2926
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7211E-01    CRITERION= .2910    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 473
*** TIME = .183823E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9317E-05    OSCILLATION LIMIT = 7.351
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 28.23    CRITERION= .2923
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7143E-01    CRITERION= .2909    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 474
*** TIME = .184612E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9370E-05    OSCILLATION LIMIT = 7.392
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.78    CRITERION= .2922
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7199E-01    CRITERION= .2906    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 475
*** TIME = .185401E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9310E-05    OSCILLATION LIMIT = 7.345
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 28.23    CRITERION= .2919
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7131E-01    CRITERION= .2905    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 476
*** TIME = .186190E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9359E-05    OSCILLATION LIMIT = 7.384
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.78    CRITERION= .2918
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7186E-01    CRITERION= .2902    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 477
*** TIME = .186979E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9302E-05    OSCILLATION LIMIT = 7.339
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 28.23    CRITERION= .2915
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7053E-01    CRITERION= .2901    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 478
*** TIME = .187768E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9348E-05    OSCILLATION LIMIT = 7.375
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.78    CRITERION= .2914
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7105E-01    CRITERION= .2898    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 479
*** TIME = .188557E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9291E-05    OSCILLATION LIMIT = 7.330
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 28.22    CRITERION= .2911
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9799E-01
    HT FLOW CONVERGENCE VALUE= .7039E-01    CRITERION= .2897    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 480
 *** TIME = .189346E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9335E-05 OSCILLATION LIMIT = 7.364

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 21:02:43 JUN 16, 1995 CP= 26018.730
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2905
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5778E-01 CRITERION= .2894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 481
 *** TIME = .190135E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1071E-04 OSCILLATION LIMIT = 8.449
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2903
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5711E-01 CRITERION= .2893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 482
 *** TIME = .190924E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1060E-04 OSCILLATION LIMIT = 8.362
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2902
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5787E-01 CRITERION= .2890 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 483
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1006E-04 OSCILLATION LIMIT = 7.934
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5704E-01 CRITERION= .2889 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 484
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1058E-04 OSCILLATION LIMIT = 8.344
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5777E-01 CRITERION= .2887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 485
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1010E-04 OSCILLATION LIMIT = 7.970
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5698E-01 CRITERION= .2886 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 486
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1052E-04 OSCILLATION LIMIT = 8.298
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2895

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5767E-01 CRITERION= .2883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 487
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1014E-04 OSCILLATION LIMIT = 7.998
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5691E-01 CRITERION= .2882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 488
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = 8.261
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5757E-01 CRITERION= .2880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 489
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1016E-04 OSCILLATION LIMIT = 8.018
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5683E-01 CRITERION= .2879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 490
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1043E-04 OSCILLATION LIMIT = 8.232
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5748E-01 CRITERION= .2876 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 491
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = 8.032
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2885
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5676E-01 CRITERION= .2875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 492
 *** TIME = .198813E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1040E-04 OSCILLATION LIMIT = 8.207
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2884
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5739E-01 CRITERION= .2873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 493
 *** TIME = .199602E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1019E-04 OSCILLATION LIMIT = 8.041
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2882
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5668E-01 CRITERION= .2872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 494
 *** TIME = .200391E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1038E-04 OSCILLATION LIMIT = 8.188
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2881
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5729E-01 CRITERION= .2869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 495
 *** TIME = .201180E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = 8.046
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2878
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5660E-01 CRITERION= .2868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 496
 *** TIME = .201969E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1036E-04 OSCILLATION LIMIT = 8.170
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5721E-01 CRITERION= .2865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 497
 *** TIME = .202758E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = 8.049
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5653E-01 CRITERION= .2865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 498
 *** TIME = .203547E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1034E-04 OSCILLATION LIMIT = 8.156
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5712E-01 CRITERION= .2862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 499
 *** TIME = .204335E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = 8.049
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5645E-01 CRITERION= .2861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 500
 *** TIME = .205124E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1032E-04 OSCILLATION LIMIT = 8.143
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5704E-01 CRITERION= .2858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 501
 *** TIME = .205913E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = 8.048
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5638E-01 CRITERION= .2858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 502
 *** TIME = .206702E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1031E-04 OSCILLATION LIMIT = 8.132
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5695E-01 CRITERION= .2855 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 503
 *** TIME = .207491E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = 8.046
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.17 CRITERION= .2864
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5630E-01 CRITERION= .2854 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 504
 *** TIME = .208280E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1029E-04 OSCILLATION LIMIT = 8.122
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2863
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5687E-01 CRITERION= .2851 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 505
 *** TIME = .209069E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1019E-04 OSCILLATION LIMIT = 8.043
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2861
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5622E-01 CRITERION= .2850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 506
 *** TIME = .209858E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1028E-04 OSCILLATION LIMIT = 8.113
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2859
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5678E-01 CRITERION= .2848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 507
 *** TIME = .210647E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1019E-04 OSCILLATION LIMIT = 8.039
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2857
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5614E-01 CRITERION= .2847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 508
 *** TIME = .211436E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1027E-04 OSCILLATION LIMIT = 8.104
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2856
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5670E-01 CRITERION= .2844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 509
 *** TIME = .212225E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = 8.035
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2853
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5605E-01 CRITERION= .2843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 510
*** TIME = .213014E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1026E-04 OSCILLATION LIMIT = 8.096
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2852
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5660E-01 CRITERION= .2841 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 511
*** TIME = .213803E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = 8.031
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2850
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5592E-01 CRITERION= .2840 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 512
*** TIME = .214592E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1025E-04 OSCILLATION LIMIT = 8.089
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2849
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5648E-01 CRITERION= .2837 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 513
*** TIME = .215381E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1017E-04 OSCILLATION LIMIT = 8.023
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2846
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5586E-01 CRITERION= .2836 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 514
*** TIME = .216170E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1024E-04 OSCILLATION LIMIT = 8.079
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.73 CRITERION= .2845
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5640E-01 CRITERION= .2834 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 515
*** TIME = .216959E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1016E-04 OSCILLATION LIMIT = 8.018
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2843
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5578E-01 CRITERION= .2833 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 516
*** TIME = .217747E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1023E-04 OSCILLATION LIMIT = 8.071
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.72 CRITERION= .2842
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
HT FLOW CONVERGENCE VALUE= .5632E-01 CRITERION= .2830 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 517
*** TIME = .218536E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1016E-04 OSCILLATION LIMIT = 8.013
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2839
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01

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HT FLOW CONVERGENCE VALUE= .5570E-01 CRITERION= .2829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 518
 *** TIME = .219325E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.064
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.72 CRITERION= .2838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5624E-01 CRITERION= .2826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 519
 *** TIME = .220114E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1015E-04 OSCILLATION LIMIT = 8.007
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.16 CRITERION= .2836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8023E-01
 HT FLOW CONVERGENCE VALUE= .5563E-01 CRITERION= .2826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 520
 *** TIME = .220903E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1021E-04 OSCILLATION LIMIT = 8.056

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 21:39:45 JUN 16, 1995 CP= 28205.420
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5114E-01 CRITERION= .2823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 521
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 8.457
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2831
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5052E-01 CRITERION= .2822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 522
 *** TIME = .222481E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 8.456
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5113E-01 CRITERION= .2820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 523
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1045E-04 OSCILLATION LIMIT = 8.242
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2828
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5046E-01 CRITERION= .2819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 524
 *** TIME = .224059E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1071E-04 OSCILLATION LIMIT = 8.446
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5104E-01 CRITERION= .2816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 525
 *** TIME = .224848E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1046E-04 OSCILLATION LIMIT = 8.254
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5039E-01 CRITERION= .2816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 526
 *** TIME = .225637E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = 8.423
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5096E-01 CRITERION= .2813 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 527
 *** TIME = .226426E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = 8.262
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5032E-01 CRITERION= .2812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 528
 *** TIME = .227215E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1065E-04 OSCILLATION LIMIT = 8.405
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5089E-01 CRITERION= .2810 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 529
 *** TIME = .228004E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.266
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5025E-01 CRITERION= .2809 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 530
 *** TIME = .228793E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1063E-04 OSCILLATION LIMIT = 8.390
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5081E-01 CRITERION= .2807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 531
 *** TIME = .229582E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.269
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.16 CRITERION= .2814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5018E-01 CRITERION= .2806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 12 COMPLETED. CUM ITER = 532
 *** TIME = .230371E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1062E-04 OSCILLATION LIMIT = 8.376

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5073E-01 CRITERION= .2803 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 13 COMPLETED. CUM ITER = 533

*** TIME = .231159E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.269

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2811
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5012E-01 CRITERION= .2803 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 14 COMPLETED. CUM ITER = 534

*** TIME = .231948E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1060E-04 OSCILLATION LIMIT = 8.365

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2810
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5066E-01 CRITERION= .2800 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 15 COMPLETED. CUM ITER = 535

*** TIME = .232737E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.268

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2808
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5005E-01 CRITERION= .2799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 16 COMPLETED. CUM ITER = 536

*** TIME = .233526E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1059E-04 OSCILLATION LIMIT = 8.355

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2807
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5059E-01 CRITERION= .2797 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 17 COMPLETED. CUM ITER = 537

*** TIME = .234315E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.266

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2805
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4991E-01 CRITERION= .2796 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 18 COMPLETED. CUM ITER = 538

*** TIME = .235104E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1058E-04 OSCILLATION LIMIT = 8.345

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2804
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .5048E-01 CRITERION= .2793 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 539

*** TIME = .235893E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = 8.258

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2801
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4988E-01 CRITERION= .2793 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 540

*** TIME = .236682E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1056E-04 OSCILLATION LIMIT = 8.331
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .5041E-01 CRITERION= .2790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 541
 *** TIME = .237471E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1046E-04 OSCILLATION LIMIT = 8.254
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4950E-01 CRITERION= .2789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 542
 *** TIME = .238260E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1055E-04 OSCILLATION LIMIT = 8.323
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4999E-01 CRITERION= .2787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 543
 *** TIME = .239049E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1045E-04 OSCILLATION LIMIT = 8.247
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4941E-01 CRITERION= .2786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 544
 *** TIME = .239838E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1054E-04 OSCILLATION LIMIT = 8.312
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4992E-01 CRITERION= .2784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 545
 *** TIME = .240627E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1045E-04 OSCILLATION LIMIT = 8.242
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4935E-01 CRITERION= .2783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 546
 *** TIME = .241416E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1053E-04 OSCILLATION LIMIT = 8.304
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4984E-01 CRITERION= .2780 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 547
 *** TIME = .242205E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1044E-04 OSCILLATION LIMIT = 8.237
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4927E-01 CRITERION= .2780 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 548
*** TIME = .242994E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1052E-04 OSCILLATION LIMIT = 8.297
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2787
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4973E-01 CRITERION= .2777 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 549
*** TIME = .243782E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1043E-04 OSCILLATION LIMIT = 8.232
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2785
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4917E-01 CRITERION= .2776 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 550
*** TIME = .244571E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1051E-04 OSCILLATION LIMIT = 8.289
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2784
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4969E-01 CRITERION= .2774 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 551
*** TIME = .245360E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1042E-04 OSCILLATION LIMIT = 8.223
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2782
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4913E-01 CRITERION= .2773 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 552
*** TIME = .246149E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1049E-04 OSCILLATION LIMIT = 8.279
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2781
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4961E-01 CRITERION= .2770 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 553
*** TIME = .246938E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1042E-04 OSCILLATION LIMIT = 8.217
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2778
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4905E-01 CRITERION= .2770 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 554
*** TIME = .247727E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.272
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2777
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
HT FLOW CONVERGENCE VALUE= .4954E-01 CRITERION= .2767 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 555
*** TIME = .248516E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1041E-04 OSCILLATION LIMIT = 8.211
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2775

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4899E-01 CRITERION= .2766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 556
 *** TIME = .249305E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 8.266
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4947E-01 CRITERION= .2764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 557
 *** TIME = .250094E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1040E-04 OSCILLATION LIMIT = 8.206
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4892E-01 CRITERION= .2763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 558
 *** TIME = .250883E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = 8.259
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4940E-01 CRITERION= .2761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 559
 *** TIME = .251672E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1039E-04 OSCILLATION LIMIT = 8.201
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.15 CRITERION= .2768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7342E-01
 HT FLOW CONVERGENCE VALUE= .4886E-01 CRITERION= .2760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 560
 *** TIME = .252461E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1046E-04 OSCILLATION LIMIT = 8.253

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:16:48 JUN 16, 1995 CP= 30393.440
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2995E-01 CRITERION= .2757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 561
 *** TIME = .253250E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2304E-04 OSCILLATION LIMIT = 18.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .2761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2924E-01 CRITERION= .2757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 562
 *** TIME = .254039E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2341E-04 OSCILLATION LIMIT = 18.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .3003E-01 CRITERION= .2754 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 563
 *** TIME = .254828E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 16.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .2757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .2754 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 564
 *** TIME = .255617E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2323E-04 OSCILLATION LIMIT = 18.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2997E-01 CRITERION= .2751 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 565
 *** TIME = .256406E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2081E-04 OSCILLATION LIMIT = 16.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .2754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2921E-01 CRITERION= .2751 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 566
 *** TIME = .257194E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2296E-04 OSCILLATION LIMIT = 18.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2991E-01 CRITERION= .2748 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 567
 *** TIME = .257983E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2102E-04 OSCILLATION LIMIT = 16.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .2751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2919E-01 CRITERION= .2748 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 568
 *** TIME = .258772E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2275E-04 OSCILLATION LIMIT = 17.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2986E-01 CRITERION= .2745 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 569
 *** TIME = .259561E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2119E-04 OSCILLATION LIMIT = 16.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .2748
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2917E-01 CRITERION= .2744 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 570
 *** TIME = .260350E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2259E-04 OSCILLATION LIMIT = 17.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2748
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2981E-01 CRITERION= .2742 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 571
 *** TIME = .261139E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2131E-04 OSCILLATION LIMIT = 16.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2745
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2906E-01 CRITERION= .2741 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 572
 *** TIME = .261928E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2246E-04 OSCILLATION LIMIT = 17.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2956E-01 CRITERION= .2739 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 573
 *** TIME = .262717E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2742
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2872E-01 CRITERION= .2738 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 574
 *** TIME = .263506E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2236E-04 OSCILLATION LIMIT = 17.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2741
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2931E-01 CRITERION= .2736 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 575
 *** TIME = .264295E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 16.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2739
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2869E-01 CRITERION= .2735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 576
 *** TIME = .265084E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2227E-04 OSCILLATION LIMIT = 17.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2926E-01 CRITERION= .2733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 577
 *** TIME = .265873E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2152E-04 OSCILLATION LIMIT = 16.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2736
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2865E-01 CRITERION= .2732 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 578
*** TIME = .266662E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2221E-04 OSCILLATION LIMIT = 17.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2735
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2922E-01 CRITERION= .2730 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 579
*** TIME = .267451E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2156E-04 OSCILLATION LIMIT = 17.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2733
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2862E-01 CRITERION= .2729 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 580
*** TIME = .268240E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2216E-04 OSCILLATION LIMIT = 17.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2732
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2918E-01 CRITERION= .2727 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 581
*** TIME = .269029E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2159E-04 OSCILLATION LIMIT = 17.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2730
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2859E-01 CRITERION= .2726 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 582
*** TIME = .269818E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2212E-04 OSCILLATION LIMIT = 17.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2729
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2914E-01 CRITERION= .2724 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 583
*** TIME = .270606E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2161E-04 OSCILLATION LIMIT = 17.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2727
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2856E-01 CRITERION= .2723 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 584
*** TIME = .271395E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2209E-04 OSCILLATION LIMIT = 17.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2726
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
HT FLOW CONVERGENCE VALUE= .2910E-01 CRITERION= .2721 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 585
*** TIME = .272184E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2162E-04 OSCILLATION LIMIT = 17.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2724
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01

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HT FLOW CONVERGENCE VALUE= .2853E-01 CRITERION= .2720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 586
 *** TIME = .272973E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2206E-04 OSCILLATION LIMIT = 17.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2723
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2908E-01 CRITERION= .2718 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 587
 *** TIME = .273762E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2721
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2853E-01 CRITERION= .2717 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 588
 *** TIME = .274551E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2204E-04 OSCILLATION LIMIT = 17.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2720
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2906E-01 CRITERION= .2714 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 589
 *** TIME = .275340E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2718
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2850E-01 CRITERION= .2714 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 590
 *** TIME = .276129E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2202E-04 OSCILLATION LIMIT = 17.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2717
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2902E-01 CRITERION= .2711 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 591
 *** TIME = .276918E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 17.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2715
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2825E-01 CRITERION= .2711 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 32 COMPLETED. CUM ITER = 592
 *** TIME = .277707E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2200E-04 OSCILLATION LIMIT = 17.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2714
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2876E-01 CRITERION= .2708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 33 COMPLETED. CUM ITER = 593
 *** TIME = .278496E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2712
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2821E-01 CRITERION= .2708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 34 COMPLETED. CUM ITER = 594
 *** TIME = .279285E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2198E-04 OSCILLATION LIMIT = 17.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2711
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2872E-01 CRITERION= .2705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 35 COMPLETED. CUM ITER = 595
 *** TIME = .280074E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .2705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 36 COMPLETED. CUM ITER = 596
 *** TIME = .280863E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2196E-04 OSCILLATION LIMIT = 17.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2868E-01 CRITERION= .2702 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 37 COMPLETED. CUM ITER = 597
 *** TIME = .281652E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2162E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2814E-01 CRITERION= .2702 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 38 COMPLETED. CUM ITER = 598
 *** TIME = .282441E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2195E-04 OSCILLATION LIMIT = 17.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.03 CRITERION= .2705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2865E-01 CRITERION= .2699 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 599
 *** TIME = .283229E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2162E-04 OSCILLATION LIMIT = 17.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .2702
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4682E-01
 HT FLOW CONVERGENCE VALUE= .2811E-01 CRITERION= .2698 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 600
 *** TIME = .284018E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2194E-04 OSCILLATION LIMIT = 17.31
 Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09

TIME= .31558E+09

SELECT FOR ITEM= MAT COMPONENT= 1
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 164.75 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 165.54 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 167.51 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 32579.910 TIME= 22:53:51
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 22:53:51 JUN 16, 1995 CP= 32579.910
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
TIME AT END OF THE LOAD STEP.31558E+09
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGED YES (EXIT)
CONVERGENCE CONTROLS USE DEFAULTS
PRINT OUTPUT CONTROLS NO PRINTOUT
DATABASE OUTPUT CONTROLS. ALL DATA WRITTEN

FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2506E-01 CRITERION= .2696 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 601
 *** TIME = .284807E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 16.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2699
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2455E-01 CRITERION= .2696 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 602
 *** TIME = .285596E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2050E-04 OSCILLATION LIMIT = 16.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2698
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2506E-01 CRITERION= .2694 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 603
 *** TIME = .286385E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2023E-04 OSCILLATION LIMIT = 15.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2696
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2453E-01 CRITERION= .2693 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 604
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2052E-04 OSCILLATION LIMIT = 16.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2696
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2503E-01 CRITERION= .2691 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 605
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2022E-04 OSCILLATION LIMIT = 15.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2694
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2450E-01 CRITERION= .2691 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 606
 *** TIME = .288752E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2052E-04 OSCILLATION LIMIT = 16.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2693
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2502E-01 CRITERION= .2689 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 607
 *** TIME = .289541E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2021E-04 OSCILLATION LIMIT = 15.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2691
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2408E-01 CRITERION= .2688 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 608
 *** TIME = .290330E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2051E-04 OSCILLATION LIMIT = 16.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2691
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2456E-01 CRITERION= .2686 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 609
 *** TIME = .291119E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2019E-04 OSCILLATION LIMIT = 15.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2689
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2403E-01 CRITERION= .2686 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 610
 *** TIME = .291908E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2050E-04 OSCILLATION LIMIT = 16.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2688
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2453E-01 CRITERION= .2683 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 611
 *** TIME = .292697E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2019E-04 OSCILLATION LIMIT = 15.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2686
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2401E-01 CRITERION= .2683 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 612
 *** TIME = .293486E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2050E-04 OSCILLATION LIMIT = 16.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2685
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2450E-01 CRITERION= .2681 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 613
 *** TIME = .294275E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2018E-04 OSCILLATION LIMIT = 15.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2399E-01 CRITERION= .2681 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 614
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2049E-04 OSCILLATION LIMIT = 16.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2448E-01 CRITERION= .2678 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 615
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2017E-04 OSCILLATION LIMIT = 15.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01

HT FLOW CONVERGENCE VALUE= .2396E-01 CRITERION= .2678 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 616
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2048E-04 OSCILLATION LIMIT = 16.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2680
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2445E-01 CRITERION= .2676 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 617
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2016E-04 OSCILLATION LIMIT = 15.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2678
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2394E-01 CRITERION= .2675 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 618
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2047E-04 OSCILLATION LIMIT = 16.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2678
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2442E-01 CRITERION= .2673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 619
 *** TIME = .299008E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2016E-04 OSCILLATION LIMIT = 15.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2676
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2392E-01 CRITERION= .2673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 20 COMPLETED. CUM ITER = 620
 *** TIME = .299797E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2047E-04 OSCILLATION LIMIT = 16.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2675
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2440E-01 CRITERION= .2671 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 21 COMPLETED. CUM ITER = 621
 *** TIME = .300586E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2015E-04 OSCILLATION LIMIT = 15.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2673
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2389E-01 CRITERION= .2670 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 22 COMPLETED. CUM ITER = 622
 *** TIME = .301375E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2046E-04 OSCILLATION LIMIT = 16.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2673
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2437E-01 CRITERION= .2668 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 23 COMPLETED. CUM ITER = 623
 *** TIME = .302164E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2014E-04 OSCILLATION LIMIT = 15.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2671
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2386E-01 CRITERION= .2668 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 24 COMPLETED. CUM ITER = 624
 *** TIME = .302953E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2045E-04 OSCILLATION LIMIT = 16.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2434E-01 CRITERION= .2666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 25 COMPLETED. CUM ITER = 625
 *** TIME = .303742E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2014E-04 OSCILLATION LIMIT = 15.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2668
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2384E-01 CRITERION= .2665 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 26 COMPLETED. CUM ITER = 626
 *** TIME = .304531E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2044E-04 OSCILLATION LIMIT = 16.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2667
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2431E-01 CRITERION= .2663 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 627
 *** TIME = .305320E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2013E-04 OSCILLATION LIMIT = 15.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2665
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2382E-01 CRITERION= .2663 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 628
 *** TIME = .306109E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2044E-04 OSCILLATION LIMIT = 16.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2665
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2429E-01 CRITERION= .2660 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 629
 *** TIME = .306898E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2013E-04 OSCILLATION LIMIT = 15.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2663
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2379E-01 CRITERION= .2660 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 630
 *** TIME = .307687E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2043E-04 OSCILLATION LIMIT = 16.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2662
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2426E-01 CRITERION= .2658 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 31 COMPLETED. CUM ITER = 631
 *** TIME = .308476E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2012E-04 OSCILLATION LIMIT = 15.87

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2660
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .2657 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 32 COMPLETED. CUM ITER = 632
 *** TIME = .309265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2042E-04 OSCILLATION LIMIT = 16.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2660
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2424E-01 CRITERION= .2655 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 33 COMPLETED. CUM ITER = 633
 *** TIME = .310053E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2011E-04 OSCILLATION LIMIT = 15.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2658
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2375E-01 CRITERION= .2655 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 34 COMPLETED. CUM ITER = 634
 *** TIME = .310842E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2041E-04 OSCILLATION LIMIT = 16.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2657
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2421E-01 CRITERION= .2653 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 35 COMPLETED. CUM ITER = 635
 *** TIME = .311631E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2011E-04 OSCILLATION LIMIT = 15.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2655
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2372E-01 CRITERION= .2652 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 36 COMPLETED. CUM ITER = 636
 *** TIME = .312420E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2040E-04 OSCILLATION LIMIT = 16.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2655
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2418E-01 CRITERION= .2650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 37 COMPLETED. CUM ITER = 637
 *** TIME = .313209E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2010E-04 OSCILLATION LIMIT = 15.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2653
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2370E-01 CRITERION= .2650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 638
 *** TIME = .313998E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2040E-04 OSCILLATION LIMIT = 16.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .2652
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2416E-01 CRITERION= .2648 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 639

*** TIME = .314787E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2010E-04 OSCILLATION LIMIT = 15.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .2650
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4074E-01
 HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .2647 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 640
 *** TIME = .315576E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2039E-04 OSCILLATION LIMIT = 16.08

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:30:55 JUN 16, 1995 CP= 34768.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 84.57 CRITERION= .2779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1719 CRITERION= .2635 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 641
 *** TIME = .323465E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2784E-04 OSCILLATION LIMIT = 219.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.98 CRITERION= .2767
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1698 CRITERION= .2624 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 642
 *** TIME = .331355E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2971E-04 OSCILLATION LIMIT = 234.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.56 CRITERION= .2756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1602 CRITERION= .2611 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 643
 *** TIME = .339244E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2938E-04 OSCILLATION LIMIT = 231.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.98 CRITERION= .2745
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1569 CRITERION= .2600 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 644
 *** TIME = .347134E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2951E-04 OSCILLATION LIMIT = 232.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.55 CRITERION= .2734
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1561 CRITERION= .2587 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 645
 *** TIME = .355023E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2933E-04 OSCILLATION LIMIT = 231.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.97 CRITERION= .2722

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1517 CRITERION= .2576 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 646
 *** TIME = .362912E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2946E-04 OSCILLATION LIMIT = 232.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.55 CRITERION= .2711
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1514 CRITERION= .2564 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 647
 *** TIME = .370802E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2928E-04 OSCILLATION LIMIT = 231.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.96 CRITERION= .2700
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1502 CRITERION= .2553 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 648
 *** TIME = .378691E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2941E-04 OSCILLATION LIMIT = 232.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.54 CRITERION= .2689
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1499 CRITERION= .2540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 649
 *** TIME = .386581E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2924E-04 OSCILLATION LIMIT = 230.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.95 CRITERION= .2677
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1461 CRITERION= .2529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 650
 *** TIME = .394470E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2937E-04 OSCILLATION LIMIT = 231.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.53 CRITERION= .2666
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1450 CRITERION= .2516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 651
 *** TIME = .402359E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2919E-04 OSCILLATION LIMIT = 230.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.95 CRITERION= .2655
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1437 CRITERION= .2505 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 652
 *** TIME = .410249E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2932E-04 OSCILLATION LIMIT = 231.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.52 CRITERION= .2644
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1414 CRITERION= .2492 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 653
 *** TIME = .418138E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2914E-04 OSCILLATION LIMIT = 229.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.94 CRITERION= .2632
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1402 CRITERION= .2481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 654
 *** TIME = .426028E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2927E-04 OSCILLATION LIMIT = 230.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.52 CRITERION= .2621
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1400 CRITERION= .2469 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 655
 *** TIME = .433917E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2910E-04 OSCILLATION LIMIT = 229.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.93 CRITERION= .2610
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1389 CRITERION= .2458 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 656
 *** TIME = .441806E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2922E-04 OSCILLATION LIMIT = 230.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.51 CRITERION= .2599
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1386 CRITERION= .2445 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 17 COMPLETED. CUM ITER = 657
 *** TIME = .449696E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2905E-04 OSCILLATION LIMIT = 229.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.93 CRITERION= .2587
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1373 CRITERION= .2434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 18 COMPLETED. CUM ITER = 658
 *** TIME = .457585E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2917E-04 OSCILLATION LIMIT = 230.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.50 CRITERION= .2576
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1365 CRITERION= .2421 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 19 COMPLETED. CUM ITER = 659
 *** TIME = .465475E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2901E-04 OSCILLATION LIMIT = 228.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.92 CRITERION= .2565
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1353 CRITERION= .2410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 20 COMPLETED. CUM ITER = 660
 *** TIME = .473364E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2913E-04 OSCILLATION LIMIT = 229.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.50 CRITERION= .2554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1348 CRITERION= .2398 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 21 COMPLETED. CUM ITER = 661
 *** TIME = .481253E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .2896E-04 OSCILLATION LIMIT = 228.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 84.91 CRITERION= .2543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1335 CRITERION= .2387 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 22 COMPLETED. CUM ITER = 662
 *** TIME = .489143E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2908E-04 OSCILLATION LIMIT = 229.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.49 CRITERION= .2532
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1333 CRITERION= .2374 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 23 COMPLETED. CUM ITER = 663
 *** TIME = .497032E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2892E-04 OSCILLATION LIMIT = 228.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.90 CRITERION= .2520
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1321 CRITERION= .2363 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 664
 *** TIME = .504922E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2903E-04 OSCILLATION LIMIT = 229.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.48 CRITERION= .2509
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1317 CRITERION= .2350 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 665
 *** TIME = .512811E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2888E-04 OSCILLATION LIMIT = 227.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.90 CRITERION= .2498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1304 CRITERION= .2339 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 666
 *** TIME = .520700E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2899E-04 OSCILLATION LIMIT = 228.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.47 CRITERION= .2487
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1299 CRITERION= .2327 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 667
 *** TIME = .528590E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2883E-04 OSCILLATION LIMIT = 227.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.89 CRITERION= .2476
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1284 CRITERION= .2316 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 668
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2894E-04 OSCILLATION LIMIT = 228.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.47 CRITERION= .2465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1278 CRITERION= .2303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 669
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2879E-04 OSCILLATION LIMIT = 227.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.88 CRITERION= .2453
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1261 CRITERION= .2292 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 670
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2889E-04 OSCILLATION LIMIT = 227.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.46 CRITERION= .2442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1251 CRITERION= .2279 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 671
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2874E-04 OSCILLATION LIMIT = 226.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.88 CRITERION= .2431
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1231 CRITERION= .2268 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 672
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2884E-04 OSCILLATION LIMIT = 227.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.45 CRITERION= .2420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1224 CRITERION= .2256 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 673
 *** TIME = .575926E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2869E-04 OSCILLATION LIMIT = 226.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.87 CRITERION= .2409
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1206 CRITERION= .2245 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 674
 *** TIME = .583816E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2880E-04 OSCILLATION LIMIT = 227.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.44 CRITERION= .2398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1195 CRITERION= .2232 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 675
 *** TIME = .591705E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2865E-04 OSCILLATION LIMIT = 226.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.86 CRITERION= .2387
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1184 CRITERION= .2221 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 676
 *** TIME = .599594E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2875E-04 OSCILLATION LIMIT = 226.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.44 CRITERION= .2376
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991

HT FLOW CONVERGENCE VALUE= .1181 CRITERION= .2208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 677
 *** TIME = .607484E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2861E-04 OSCILLATION LIMIT = 225.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.85 CRITERION= .2365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1171 CRITERION= .2197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 678
 *** TIME = .615373E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2871E-04 OSCILLATION LIMIT = 226.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.43 CRITERION= .2354
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1168 CRITERION= .2185 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 679
 *** TIME = .623263E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2856E-04 OSCILLATION LIMIT = 225.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 84.85 CRITERION= .2343
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2991
 HT FLOW CONVERGENCE VALUE= .1158 CRITERION= .2174 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 680
 *** TIME = .631152E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2866E-04 OSCILLATION LIMIT = 226.1

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 00:07:57 JUN 17, 1995 CP= 36957.390
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 55.25 CRITERION= .2243
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7519E-01 CRITERION= .2164 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 681
 *** TIME = .639041E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3610E-04 OSCILLATION LIMIT = 284.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.66 CRITERION= .2234
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7450E-01 CRITERION= .2156 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 682
 *** TIME = .646931E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3526E-04 OSCILLATION LIMIT = 278.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.24 CRITERION= .2226
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7458E-01 CRITERION= .2146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 683
 *** TIME = .654820E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3504E-04 OSCILLATION LIMIT = 276.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.66 CRITERION= .2217
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7390E-01 CRITERION= .2138 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 684
 *** TIME = .662710E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3529E-04 OSCILLATION LIMIT = 278.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.24 CRITERION= .2208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7395E-01 CRITERION= .2129 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 685
 *** TIME = .670599E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3501E-04 OSCILLATION LIMIT = 276.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.66 CRITERION= .2200
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7326E-01 CRITERION= .2121 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 686
 *** TIME = .678488E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3527E-04 OSCILLATION LIMIT = 278.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.23 CRITERION= .2191
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7331E-01 CRITERION= .2111 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 687
 *** TIME = .686378E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3499E-04 OSCILLATION LIMIT = 276.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.65 CRITERION= .2183
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7261E-01 CRITERION= .2103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 688
 *** TIME = .694267E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3524E-04 OSCILLATION LIMIT = 278.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.23 CRITERION= .2174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7266E-01 CRITERION= .2094 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 689
 *** TIME = .702157E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3497E-04 OSCILLATION LIMIT = 275.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.65 CRITERION= .2166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7198E-01 CRITERION= .2086 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 690
 *** TIME = .710046E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3521E-04 OSCILLATION LIMIT = 277.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.23 CRITERION= .2157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .7202E-01 CRITERION= .2076 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 691
 *** TIME = .717935E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3494E-04 OSCILLATION LIMIT = 275.7

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.65 CRITERION= .2149
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7135E-01 CRITERION= .2068 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 692
*** TIME = .725825E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3519E-04 OSCILLATION LIMIT = 277.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.23 CRITERION= .2140
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7139E-01 CRITERION= .2058 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 693
*** TIME = .733714E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3492E-04 OSCILLATION LIMIT = 275.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.64 CRITERION= .2131
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7073E-01 CRITERION= .2050 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 694
*** TIME = .741604E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3516E-04 OSCILLATION LIMIT = 277.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.22 CRITERION= .2123
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7079E-01 CRITERION= .2041 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 695
*** TIME = .749493E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3490E-04 OSCILLATION LIMIT = 275.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.64 CRITERION= .2114
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7023E-01 CRITERION= .2033 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 696
*** TIME = .757382E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3513E-04 OSCILLATION LIMIT = 277.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.22 CRITERION= .2106
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .7036E-01 CRITERION= .2023 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 697
*** TIME = .765272E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3487E-04 OSCILLATION LIMIT = 275.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.64 CRITERION= .2097
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6969E-01 CRITERION= .2015 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 698
*** TIME = .773161E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3511E-04 OSCILLATION LIMIT = 277.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.22 CRITERION= .2089
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6973E-01 CRITERION= .2006 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 699

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*** TIME = .781051E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3485E-04    OSCILLATION LIMIT = 274.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.63    CRITERION= .2081
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6907E-01    CRITERION= .1998    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 700
*** TIME = .788940E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3508E-04    OSCILLATION LIMIT = 276.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.21    CRITERION= .2072
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6910E-01    CRITERION= .1988    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 701
*** TIME = .796829E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3482E-04    OSCILLATION LIMIT = 274.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.63    CRITERION= .2064
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6844E-01    CRITERION= .1980    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 702
*** TIME = .804719E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3505E-04    OSCILLATION LIMIT = 276.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.21    CRITERION= .2055
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6846E-01    CRITERION= .1970    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 703
*** TIME = .812608E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3480E-04    OSCILLATION LIMIT = 274.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.63    CRITERION= .2047
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6781E-01    CRITERION= .1962    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 704
*** TIME = .820498E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3502E-04    OSCILLATION LIMIT = 276.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.21    CRITERION= .2038
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6791E-01    CRITERION= .1953    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 705
*** TIME = .828387E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3478E-04    OSCILLATION LIMIT = 274.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.62    CRITERION= .2030
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6762E-01    CRITERION= .1945    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 706
*** TIME = .836276E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3500E-04    OSCILLATION LIMIT = 276.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 55.20    CRITERION= .2021
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
    HT FLOW CONVERGENCE VALUE= .6768E-01    CRITERION= .1935    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 707
*** TIME = .844166E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3475E-04 OSCILLATION LIMIT = 274.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.62 CRITERION= .2013
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6702E-01 CRITERION= .1927 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 708
*** TIME = .852055E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3497E-04 OSCILLATION LIMIT = 275.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.20 CRITERION= .2004
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6706E-01 CRITERION= .1918 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 709
*** TIME = .859945E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3473E-04 OSCILLATION LIMIT = 274.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.62 CRITERION= .1996
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6659E-01 CRITERION= .1910 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 710
*** TIME = .867834E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3494E-04 OSCILLATION LIMIT = 275.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.20 CRITERION= .1988
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6664E-01 CRITERION= .1900 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 711
*** TIME = .875723E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3471E-04 OSCILLATION LIMIT = 273.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.61 CRITERION= .1979
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6599E-01 CRITERION= .1892 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 712
*** TIME = .883613E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3492E-04 OSCILLATION LIMIT = 275.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.19 CRITERION= .1971
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6600E-01 CRITERION= .1882 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 713
*** TIME = .891502E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3468E-04 OSCILLATION LIMIT = 273.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.61 CRITERION= .1962
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
HT FLOW CONVERGENCE VALUE= .6536E-01 CRITERION= .1874 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 714
*** TIME = .899392E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3489E-04 OSCILLATION LIMIT = 275.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.19 CRITERION= .1954

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6538E-01 CRITERION= .1865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 715
 *** TIME = .907281E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3466E-04 OSCILLATION LIMIT = 273.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.61 CRITERION= .1945
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6473E-01 CRITERION= .1857 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 716
 *** TIME = .915170E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3486E-04 OSCILLATION LIMIT = 275.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.19 CRITERION= .1937
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6473E-01 CRITERION= .1847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 717
 *** TIME = .923060E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3463E-04 OSCILLATION LIMIT = 273.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.60 CRITERION= .1928
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6409E-01 CRITERION= .1839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 718
 *** TIME = .930949E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3484E-04 OSCILLATION LIMIT = 274.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.18 CRITERION= .1920
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6410E-01 CRITERION= .1830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 719
 *** TIME = .938839E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3461E-04 OSCILLATION LIMIT = 273.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.60 CRITERION= .1911
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1964
 HT FLOW CONVERGENCE VALUE= .6347E-01 CRITERION= .1822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 720
 *** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3481E-04 OSCILLATION LIMIT = 274.6

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 00:45:02 JUN 17, 1995 CP= 39149.570
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1947
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .1814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 721
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5650E-04 OSCILLATION LIMIT = 445.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.15 CRITERION= .1823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1868
 HT FLOW CONVERGENCE VALUE= .2864E-01 CRITERION= .1808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 722
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5725E-04 OSCILLATION LIMIT = 451.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1856
 HT FLOW CONVERGENCE VALUE= .2854E-01 CRITERION= .1801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 723
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5702E-04 OSCILLATION LIMIT = 449.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.15 CRITERION= .1810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1876
 HT FLOW CONVERGENCE VALUE= .2845E-01 CRITERION= .1795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 724
 *** TIME = .978286E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5724E-04 OSCILLATION LIMIT = 451.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1857
 HT FLOW CONVERGENCE VALUE= .2832E-01 CRITERION= .1788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 725
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5701E-04 OSCILLATION LIMIT = 449.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.15 CRITERION= .1796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1877
 HT FLOW CONVERGENCE VALUE= .2822E-01 CRITERION= .1782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 726
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5723E-04 OSCILLATION LIMIT = 451.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1859
 HT FLOW CONVERGENCE VALUE= .2809E-01 CRITERION= .1774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 727
 *** TIME = .100195E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5700E-04 OSCILLATION LIMIT = 449.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.15 CRITERION= .1783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1878
 HT FLOW CONVERGENCE VALUE= .2800E-01 CRITERION= .1769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 728
 *** TIME = .100984E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5723E-04 OSCILLATION LIMIT = 451.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1860
 HT FLOW CONVERGENCE VALUE= .2789E-01 CRITERION= .1761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 729
 *** TIME = .101773E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .5699E-04 OSCILLATION LIMIT = 449.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 18.15 CRITERION= .1770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1879
 HT FLOW CONVERGENCE VALUE= .2779E-01 CRITERION= .1755 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 730
 *** TIME = .102562E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5722E-04 OSCILLATION LIMIT = 451.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1862
 HT FLOW CONVERGENCE VALUE= .2767E-01 CRITERION= .1748 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 731
 *** TIME = .103351E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5698E-04 OSCILLATION LIMIT = 449.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1880
 HT FLOW CONVERGENCE VALUE= .2755E-01 CRITERION= .1742 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 732
 *** TIME = .104140E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5721E-04 OSCILLATION LIMIT = 451.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1863
 HT FLOW CONVERGENCE VALUE= .2744E-01 CRITERION= .1735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 733
 *** TIME = .104929E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5698E-04 OSCILLATION LIMIT = 449.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1881
 HT FLOW CONVERGENCE VALUE= .2733E-01 CRITERION= .1729 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 734
 *** TIME = .105718E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5721E-04 OSCILLATION LIMIT = 451.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.73 CRITERION= .1738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1865
 HT FLOW CONVERGENCE VALUE= .2723E-01 CRITERION= .1721 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 735
 *** TIME = .106507E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5697E-04 OSCILLATION LIMIT = 449.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1731
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1882
 HT FLOW CONVERGENCE VALUE= .2712E-01 CRITERION= .1716 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 736
 *** TIME = .107296E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5720E-04 OSCILLATION LIMIT = 451.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1725
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1866
 HT FLOW CONVERGENCE VALUE= .2702E-01 CRITERION= .1708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 737
*** TIME = .108085E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5696E-04 OSCILLATION LIMIT = 449.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1717
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1883
HT FLOW CONVERGENCE VALUE= .2690E-01 CRITERION= .1702 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 738
*** TIME = .108874E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5719E-04 OSCILLATION LIMIT = 451.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1711
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1868
HT FLOW CONVERGENCE VALUE= .2681E-01 CRITERION= .1695 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 739
*** TIME = .109663E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5695E-04 OSCILLATION LIMIT = 449.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1704
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1884
HT FLOW CONVERGENCE VALUE= .2669E-01 CRITERION= .1689 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 740
*** TIME = .110452E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5719E-04 OSCILLATION LIMIT = 451.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1698
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1869
HT FLOW CONVERGENCE VALUE= .2663E-01 CRITERION= .1682 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 741
*** TIME = .111241E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5694E-04 OSCILLATION LIMIT = 449.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1691
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1885
HT FLOW CONVERGENCE VALUE= .2657E-01 CRITERION= .1676 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 742
*** TIME = .112029E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5718E-04 OSCILLATION LIMIT = 451.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1685
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1871
HT FLOW CONVERGENCE VALUE= .2648E-01 CRITERION= .1668 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 743
*** TIME = .112818E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5694E-04 OSCILLATION LIMIT = 449.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1678
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1873
HT FLOW CONVERGENCE VALUE= .2639E-01 CRITERION= .1663 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 744
*** TIME = .113607E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5717E-04 OSCILLATION LIMIT = 451.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1672
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1873

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HT FLOW CONVERGENCE VALUE= .2638E-01 CRITERION= .1655 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 745
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5693E-04 OSCILLATION LIMIT = 449.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1665
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1888
 HT FLOW CONVERGENCE VALUE= .2627E-01 CRITERION= .1649 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 746
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5717E-04 OSCILLATION LIMIT = 451.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1659
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1874
 HT FLOW CONVERGENCE VALUE= .2624E-01 CRITERION= .1642 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 747
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5692E-04 OSCILLATION LIMIT = 449.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1651
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1889
 HT FLOW CONVERGENCE VALUE= .2610E-01 CRITERION= .1636 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 748
 *** TIME = .116763E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5716E-04 OSCILLATION LIMIT = 451.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1645
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1876
 HT FLOW CONVERGENCE VALUE= .2601E-01 CRITERION= .1629 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 749
 *** TIME = .117552E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5691E-04 OSCILLATION LIMIT = 449.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1638
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1890
 HT FLOW CONVERGENCE VALUE= .2587E-01 CRITERION= .1623 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 750
 *** TIME = .118341E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5716E-04 OSCILLATION LIMIT = 450.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1632
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1877
 HT FLOW CONVERGENCE VALUE= .2578E-01 CRITERION= .1615 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 751
 *** TIME = .119130E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5691E-04 OSCILLATION LIMIT = 449.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1625
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1891
 HT FLOW CONVERGENCE VALUE= .2564E-01 CRITERION= .1610 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 752
 *** TIME = .119919E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5715E-04 OSCILLATION LIMIT = 450.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1619
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1879
 HT FLOW CONVERGENCE VALUE= .2557E-01 CRITERION= .1602 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 753
 *** TIME = .120708E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5690E-04 OSCILLATION LIMIT = 448.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1893
 HT FLOW CONVERGENCE VALUE= .2544E-01 CRITERION= .1596 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 754
 *** TIME = .121497E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5714E-04 OSCILLATION LIMIT = 450.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1606
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1881
 HT FLOW CONVERGENCE VALUE= .2537E-01 CRITERION= .1589 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 755
 *** TIME = .122286E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5689E-04 OSCILLATION LIMIT = 448.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1599
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1894
 HT FLOW CONVERGENCE VALUE= .2521E-01 CRITERION= .1583 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 756
 *** TIME = .123075E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5714E-04 OSCILLATION LIMIT = 450.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1593
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1882
 HT FLOW CONVERGENCE VALUE= .2513E-01 CRITERION= .1576 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 757
 *** TIME = .123864E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5689E-04 OSCILLATION LIMIT = 448.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1894
 HT FLOW CONVERGENCE VALUE= .2498E-01 CRITERION= .1570 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 758
 *** TIME = .124653E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5713E-04 OSCILLATION LIMIT = 450.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.72 CRITERION= .1580
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1883
 HT FLOW CONVERGENCE VALUE= .2493E-01 CRITERION= .1562 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 759
 *** TIME = .125441E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5688E-04 OSCILLATION LIMIT = 448.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.14 CRITERION= .1573
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1895
 HT FLOW CONVERGENCE VALUE= .2479E-01 CRITERION= .1557 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 40 COMPLETED. CUM ITER = 760
 *** TIME = .126230E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5712E-04 OSCILLATION LIMIT = 450.7

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:22:05 JUN 17, 1995 CP= 41340.650
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1557
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1869
 HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .1550 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 1 COMPLETED. CUM ITER = 761
 *** TIME = .127019E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4196E-04 OSCILLATION LIMIT = 331.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1551
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1862
 HT FLOW CONVERGENCE VALUE= .2347E-01 CRITERION= .1546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 2 COMPLETED. CUM ITER = 762
 *** TIME = .127808E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4232E-04 OSCILLATION LIMIT = 333.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1546
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1850
 HT FLOW CONVERGENCE VALUE= .2322E-01 CRITERION= .1540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 3 COMPLETED. CUM ITER = 763
 *** TIME = .128597E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4216E-04 OSCILLATION LIMIT = 332.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1540
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1864
 HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 4 COMPLETED. CUM ITER = 764
 *** TIME = .129386E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4231E-04 OSCILLATION LIMIT = 333.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1535
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1852
 HT FLOW CONVERGENCE VALUE= .2307E-01 CRITERION= .1529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 5 COMPLETED. CUM ITER = 765
 *** TIME = .130175E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4215E-04 OSCILLATION LIMIT = 332.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1529
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1865
 HT FLOW CONVERGENCE VALUE= .2318E-01 CRITERION= .1524 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 766
 *** TIME = .130964E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4230E-04 OSCILLATION LIMIT = 333.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1525
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1853
 HT FLOW CONVERGENCE VALUE= .2292E-01 CRITERION= .1518 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 767

*** TIME = .131753E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4214E-04 OSCILLATION LIMIT = 332.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1519
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1866
 HT FLOW CONVERGENCE VALUE= .2303E-01 CRITERION= .1514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 768
 *** TIME = .132542E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4229E-04 OSCILLATION LIMIT = 333.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1514
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1854
 HT FLOW CONVERGENCE VALUE= .2278E-01 CRITERION= .1507 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 769
 *** TIME = .133331E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4213E-04 OSCILLATION LIMIT = 332.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1508
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1867
 HT FLOW CONVERGENCE VALUE= .2288E-01 CRITERION= .1503 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 770
 *** TIME = .134120E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4228E-04 OSCILLATION LIMIT = 333.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1503
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1856
 HT FLOW CONVERGENCE VALUE= .2264E-01 CRITERION= .1497 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 771
 *** TIME = .134909E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4212E-04 OSCILLATION LIMIT = 332.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1497
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1868
 HT FLOW CONVERGENCE VALUE= .2274E-01 CRITERION= .1492 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 772
 *** TIME = .135698E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4227E-04 OSCILLATION LIMIT = 333.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1492
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1857
 HT FLOW CONVERGENCE VALUE= .2250E-01 CRITERION= .1486 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 773
 *** TIME = .136487E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4210E-04 OSCILLATION LIMIT = 332.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1486
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1869
 HT FLOW CONVERGENCE VALUE= .2259E-01 CRITERION= .1481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 774
 *** TIME = .137276E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4226E-04 OSCILLATION LIMIT = 333.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1482
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1858
 HT FLOW CONVERGENCE VALUE= .2236E-01 CRITERION= .1475 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 775
*** TIME = .138065E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4209E-04 OSCILLATION LIMIT = 332.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1476
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1871
HT FLOW CONVERGENCE VALUE= .2244E-01 CRITERION= .1471 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 776
*** TIME = .138853E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4226E-04 OSCILLATION LIMIT = 333.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1471
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1860
HT FLOW CONVERGENCE VALUE= .2222E-01 CRITERION= .1464 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 777
*** TIME = .139642E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4208E-04 OSCILLATION LIMIT = 332.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1465
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1872
HT FLOW CONVERGENCE VALUE= .2229E-01 CRITERION= .1460 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 778
*** TIME = .140431E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4225E-04 OSCILLATION LIMIT = 333.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1460
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1861
HT FLOW CONVERGENCE VALUE= .2206E-01 CRITERION= .1454 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 779
*** TIME = .141220E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4207E-04 OSCILLATION LIMIT = 331.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1454
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1873
HT FLOW CONVERGENCE VALUE= .2213E-01 CRITERION= .1449 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 780
*** TIME = .142009E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4224E-04 OSCILLATION LIMIT = 333.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1449
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1863
HT FLOW CONVERGENCE VALUE= .2190E-01 CRITERION= .1443 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 781
*** TIME = .142798E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4206E-04 OSCILLATION LIMIT = 331.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1443
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1874
HT FLOW CONVERGENCE VALUE= .2195E-01 CRITERION= .1438 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 782
*** TIME = .143587E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4223E-04 OSCILLATION LIMIT = 333.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1439

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1864
 HT FLOW CONVERGENCE VALUE= .2174E-01 CRITERION= .1432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 783
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4205E-04 OSCILLATION LIMIT = 331.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1875
 HT FLOW CONVERGENCE VALUE= .2179E-01 CRITERION= .1428 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 784
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4222E-04 OSCILLATION LIMIT = 333.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1865
 HT FLOW CONVERGENCE VALUE= .2157E-01 CRITERION= .1421 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 785
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4204E-04 OSCILLATION LIMIT = 331.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1422
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1876
 HT FLOW CONVERGENCE VALUE= .2163E-01 CRITERION= .1417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 786
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4221E-04 OSCILLATION LIMIT = 333.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1867
 HT FLOW CONVERGENCE VALUE= .2143E-01 CRITERION= .1411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 787
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4203E-04 OSCILLATION LIMIT = 331.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1877
 HT FLOW CONVERGENCE VALUE= .2148E-01 CRITERION= .1406 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 788
 *** TIME = .148321E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4220E-04 OSCILLATION LIMIT = 332.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1406
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1868
 HT FLOW CONVERGENCE VALUE= .2128E-01 CRITERION= .1400 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 789
 *** TIME = .149110E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4202E-04 OSCILLATION LIMIT = 331.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1400
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1878
 HT FLOW CONVERGENCE VALUE= .2133E-01 CRITERION= .1395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 790
 *** TIME = .149899E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4219E-04 OSCILLATION LIMIT = 332.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1869
 HT FLOW CONVERGENCE VALUE= .2114E-01 CRITERION= .1389 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 791
 *** TIME = .150688E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4201E-04 OSCILLATION LIMIT = 331.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1390
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1879
 HT FLOW CONVERGENCE VALUE= .2118E-01 CRITERION= .1385 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 792
 *** TIME = .151476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4218E-04 OSCILLATION LIMIT = 332.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1385
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1871
 HT FLOW CONVERGENCE VALUE= .2098E-01 CRITERION= .1378 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 793
 *** TIME = .152265E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4200E-04 OSCILLATION LIMIT = 331.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1379
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1880
 HT FLOW CONVERGENCE VALUE= .2102E-01 CRITERION= .1374 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 794
 *** TIME = .153054E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4217E-04 OSCILLATION LIMIT = 332.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1374
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1872
 HT FLOW CONVERGENCE VALUE= .2083E-01 CRITERION= .1368 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 795
 *** TIME = .153843E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4199E-04 OSCILLATION LIMIT = 331.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1368
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1882
 HT FLOW CONVERGENCE VALUE= .2086E-01 CRITERION= .1363 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 796
 *** TIME = .154632E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4216E-04 OSCILLATION LIMIT = 332.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1363
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1874
 HT FLOW CONVERGENCE VALUE= .2068E-01 CRITERION= .1357 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 797
 *** TIME = .155421E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4198E-04 OSCILLATION LIMIT = 331.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1357
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1883
 HT FLOW CONVERGENCE VALUE= .2072E-01 CRITERION= .1352 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 798
 *** TIME = .156210E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .4215E-04 OSCILLATION LIMIT = 332.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.175 CRITERION= .1353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1875
 HT FLOW CONVERGENCE VALUE= .2054E-01 CRITERION= .1346 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 799
 *** TIME = .156999E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4197E-04 OSCILLATION LIMIT = 331.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.590 CRITERION= .1346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1884
 HT FLOW CONVERGENCE VALUE= .2056E-01 CRITERION= .1341 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 800
 *** TIME = .157788E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4214E-04 OSCILLATION LIMIT = 332.5

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:59:08 JUN 17, 1995 CP= 43530.780
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1341
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1614
 HT FLOW CONVERGENCE VALUE= .1952E-01 CRITERION= .1336 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 801
 *** TIME = .158577E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3061E-04 OSCILLATION LIMIT = 241.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1623
 HT FLOW CONVERGENCE VALUE= .1950E-01 CRITERION= .1333 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 802
 *** TIME = .159366E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3087E-04 OSCILLATION LIMIT = 243.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1333
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1618
 HT FLOW CONVERGENCE VALUE= .1930E-01 CRITERION= .1328 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 803
 *** TIME = .160155E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3068E-04 OSCILLATION LIMIT = 242.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1328
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1624
 HT FLOW CONVERGENCE VALUE= .1936E-01 CRITERION= .1325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 804
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3087E-04 OSCILLATION LIMIT = 243.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1325
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1619
 HT FLOW CONVERGENCE VALUE= .1916E-01 CRITERION= .1320 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 805
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3067E-04 OSCILLATION LIMIT = 242.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1320
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1625
 HT FLOW CONVERGENCE VALUE= .1924E-01 CRITERION= .1316 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 806
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3086E-04 OSCILLATION LIMIT = 243.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1316
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1621
 HT FLOW CONVERGENCE VALUE= .1906E-01 CRITERION= .1311 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 807
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3067E-04 OSCILLATION LIMIT = 242.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1311
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1626
 HT FLOW CONVERGENCE VALUE= .1913E-01 CRITERION= .1308 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 808
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3086E-04 OSCILLATION LIMIT = 243.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1308
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1622
 HT FLOW CONVERGENCE VALUE= .1895E-01 CRITERION= .1303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 809
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3067E-04 OSCILLATION LIMIT = 241.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1627
 HT FLOW CONVERGENCE VALUE= .1902E-01 CRITERION= .1300 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 810
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3086E-04 OSCILLATION LIMIT = 243.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1300
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1623
 HT FLOW CONVERGENCE VALUE= .1880E-01 CRITERION= .1295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 811
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3066E-04 OSCILLATION LIMIT = 241.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1295
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1628
 HT FLOW CONVERGENCE VALUE= .1884E-01 CRITERION= .1291 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 812
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3085E-04 OSCILLATION LIMIT = 243.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1291
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1623

HT FLOW CONVERGENCE VALUE= .1863E-01 CRITERION= .1286 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 813
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3066E-04 OSCILLATION LIMIT = 241.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1286
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1629
 HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .1283 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 814
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3085E-04 OSCILLATION LIMIT = 243.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1283
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1625
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .1278 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 815
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3065E-04 OSCILLATION LIMIT = 241.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1278
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1629
 HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .1275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 816
 *** TIME = .170411E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3084E-04 OSCILLATION LIMIT = 243.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1275
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1626
 HT FLOW CONVERGENCE VALUE= .1835E-01 CRITERION= .1270 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 817
 *** TIME = .171200E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3065E-04 OSCILLATION LIMIT = 241.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1270
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1630
 HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .1266 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 818
 *** TIME = .171989E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3084E-04 OSCILLATION LIMIT = 243.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1266
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1627
 HT FLOW CONVERGENCE VALUE= .1824E-01 CRITERION= .1261 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 819
 *** TIME = .172778E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3065E-04 OSCILLATION LIMIT = 241.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1261
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1631
 HT FLOW CONVERGENCE VALUE= .1830E-01 CRITERION= .1258 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 820
 *** TIME = .173567E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3084E-04 OSCILLATION LIMIT = 243.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1258
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1628
 HT FLOW CONVERGENCE VALUE= .1813E-01 CRITERION= .1253 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 821
 *** TIME = .174356E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3064E-04 OSCILLATION LIMIT = 241.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1253
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1632
 HT FLOW CONVERGENCE VALUE= .1818E-01 CRITERION= .1250 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 822
 *** TIME = .175145E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3083E-04 OSCILLATION LIMIT = 243.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1249
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1629
 HT FLOW CONVERGENCE VALUE= .1802E-01 CRITERION= .1245 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 823
 *** TIME = .175934E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3064E-04 OSCILLATION LIMIT = 241.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1244
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1633
 HT FLOW CONVERGENCE VALUE= .1808E-01 CRITERION= .1241 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 824
 *** TIME = .176723E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3083E-04 OSCILLATION LIMIT = 243.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1241
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1630
 HT FLOW CONVERGENCE VALUE= .1791E-01 CRITERION= .1236 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 825
 *** TIME = .177512E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3064E-04 OSCILLATION LIMIT = 241.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1236
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1634
 HT FLOW CONVERGENCE VALUE= .1796E-01 CRITERION= .1233 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 826
 *** TIME = .178300E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3082E-04 OSCILLATION LIMIT = 243.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1233
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1631
 HT FLOW CONVERGENCE VALUE= .1778E-01 CRITERION= .1228 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 827
 *** TIME = .179089E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3063E-04 OSCILLATION LIMIT = 241.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1228
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1635
 HT FLOW CONVERGENCE VALUE= .1782E-01 CRITERION= .1225 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 828
 *** TIME = .179878E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3082E-04 OSCILLATION LIMIT = 243.1

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1224
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1632
 HT FLOW CONVERGENCE VALUE= .1766E-01 CRITERION= .1220 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 829
 *** TIME = .180667E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3063E-04 OSCILLATION LIMIT = 241.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1636
 HT FLOW CONVERGENCE VALUE= .1770E-01 CRITERION= .1216 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 830
 *** TIME = .181456E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3082E-04 OSCILLATION LIMIT = 243.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1216
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1633
 HT FLOW CONVERGENCE VALUE= .1755E-01 CRITERION= .1211 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 831
 *** TIME = .182245E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3063E-04 OSCILLATION LIMIT = 241.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1637
 HT FLOW CONVERGENCE VALUE= .1759E-01 CRITERION= .1208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 32 COMPLETED. CUM ITER = 832
 *** TIME = .183034E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3081E-04 OSCILLATION LIMIT = 243.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1634
 HT FLOW CONVERGENCE VALUE= .1744E-01 CRITERION= .1203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 33 COMPLETED. CUM ITER = 833
 *** TIME = .183823E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3062E-04 OSCILLATION LIMIT = 241.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1203
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1638
 HT FLOW CONVERGENCE VALUE= .1748E-01 CRITERION= .1199 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 34 COMPLETED. CUM ITER = 834
 *** TIME = .184612E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3081E-04 OSCILLATION LIMIT = 243.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.935 CRITERION= .1199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1635
 HT FLOW CONVERGENCE VALUE= .1733E-01 CRITERION= .1194 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 35 COMPLETED. CUM ITER = 835
 *** TIME = .185401E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3062E-04 OSCILLATION LIMIT = 241.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.521 CRITERION= .1194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1639
 HT FLOW CONVERGENCE VALUE= .1737E-01 CRITERION= .1191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 36 COMPLETED. CUM ITER = 836

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*** TIME = .186190E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3080E-04    OSCILLATION LIMIT = 243.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.935    CRITERION= .1191
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1636
    HT FLOW CONVERGENCE VALUE= .1722E-01    CRITERION= .1186    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 37 COMPLETED. CUM ITER = 837
*** TIME = .186979E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3062E-04    OSCILLATION LIMIT = 241.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.521    CRITERION= .1186
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1640
    HT FLOW CONVERGENCE VALUE= .1726E-01    CRITERION= .1183    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 38 COMPLETED. CUM ITER = 838
*** TIME = .187768E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3080E-04    OSCILLATION LIMIT = 243.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.935    CRITERION= .1183
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1637
    HT FLOW CONVERGENCE VALUE= .1710E-01    CRITERION= .1178    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 839
*** TIME = .188557E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3061E-04    OSCILLATION LIMIT = 241.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.521    CRITERION= .1178
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1641
    HT FLOW CONVERGENCE VALUE= .1714E-01    CRITERION= .1174    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 840
*** TIME = .189346E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3080E-04    OSCILLATION LIMIT = 243.0

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 02:36:28 JUN 17, 1995 CP= 45720.660
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 6.031    CRITERION= .1176
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1458
    HT FLOW CONVERGENCE VALUE= .1712E-01    CRITERION= .1170    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 841
*** TIME = .190135E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2143E-04    OSCILLATION LIMIT = 169.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.612    CRITERION= .1171
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
    HT FLOW CONVERGENCE VALUE= .1714E-01    CRITERION= .1168    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 842
*** TIME = .190923E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2162E-04    OSCILLATION LIMIT = 170.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.031    CRITERION= .1169
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1461
    HT FLOW CONVERGENCE VALUE= .1698E-01    CRITERION= .1163    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 843
*** TIME = .191712E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2146E-04 OSCILLATION LIMIT = 169.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.612 CRITERION= .1165
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
HT FLOW CONVERGENCE VALUE= .1704E-01 CRITERION= .1161 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 844
*** TIME = .192501E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1162
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
HT FLOW CONVERGENCE VALUE= .1689E-01 CRITERION= .1157 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 845
*** TIME = .193290E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2146E-04 OSCILLATION LIMIT = 169.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.612 CRITERION= .1158
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
HT FLOW CONVERGENCE VALUE= .1696E-01 CRITERION= .1154 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 846
*** TIME = .194079E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1156
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
HT FLOW CONVERGENCE VALUE= .1680E-01 CRITERION= .1150 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 847
*** TIME = .194868E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2146E-04 OSCILLATION LIMIT = 169.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.612 CRITERION= .1151
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
HT FLOW CONVERGENCE VALUE= .1687E-01 CRITERION= .1148 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 848
*** TIME = .195657E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1149
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
HT FLOW CONVERGENCE VALUE= .1671E-01 CRITERION= .1143 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 849
*** TIME = .196446E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2146E-04 OSCILLATION LIMIT = 169.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.612 CRITERION= .1145
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
HT FLOW CONVERGENCE VALUE= .1678E-01 CRITERION= .1141 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 850
*** TIME = .197235E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1142

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
 HT FLOW CONVERGENCE VALUE= .1663E-01 CRITERION= .1137 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 851
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1138
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1669E-01 CRITERION= .1134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 852
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .1130 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 853
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1131
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1660E-01 CRITERION= .1127 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 854
 *** TIME = .200391E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1129
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .1123 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 855
 *** TIME = .201180E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1651E-01 CRITERION= .1121 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 856
 *** TIME = .201969E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1122
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1637E-01 CRITERION= .1116 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 857
 *** TIME = .202758E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1642E-01 CRITERION= .1114 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 858
 *** TIME = .203547E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1115
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1628E-01 CRITERION= .1110 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 859
 *** TIME = .204335E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1111
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1469
 HT FLOW CONVERGENCE VALUE= .1634E-01 CRITERION= .1107 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 860
 *** TIME = .205124E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1109
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1619E-01 CRITERION= .1103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 861
 *** TIME = .205913E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1104
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1470
 HT FLOW CONVERGENCE VALUE= .1625E-01 CRITERION= .1100 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 862
 *** TIME = .206702E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1102
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1469
 HT FLOW CONVERGENCE VALUE= .1611E-01 CRITERION= .1096 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 863
 *** TIME = .207491E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1098
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1470
 HT FLOW CONVERGENCE VALUE= .1616E-01 CRITERION= .1094 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 864
 *** TIME = .208280E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1095
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1470
 HT FLOW CONVERGENCE VALUE= .1601E-01 CRITERION= .1090 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 865
 *** TIME = .209069E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1091
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1471
 HT FLOW CONVERGENCE VALUE= .1607E-01 CRITERION= .1087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 866
 *** TIME = .209858E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1471
 HT FLOW CONVERGENCE VALUE= .1593E-01 CRITERION= .1083 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 867
 *** TIME = .210647E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2147E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1472
 HT FLOW CONVERGENCE VALUE= .1598E-01 CRITERION= .1080 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 868
 *** TIME = .211436E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1472
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .1076 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 869
 *** TIME = .212225E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1077
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1473
 HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .1074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 870
 *** TIME = .213014E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1473
 HT FLOW CONVERGENCE VALUE= .1575E-01 CRITERION= .1069 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 871
 *** TIME = .213803E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1474
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .1067 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 872
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1474
 HT FLOW CONVERGENCE VALUE= .1566E-01 CRITERION= .1063 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 873
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1064
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1475
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .1060 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 874
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1474
 HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .1056 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 875
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1475
 HT FLOW CONVERGENCE VALUE= .1562E-01 CRITERION= .1053 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 876
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1475
 HT FLOW CONVERGENCE VALUE= .1548E-01 CRITERION= .1049 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 877
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1476
 HT FLOW CONVERGENCE VALUE= .1553E-01 CRITERION= .1047 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 878
 *** TIME = .219325E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.031 CRITERION= .1048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1476
 HT FLOW CONVERGENCE VALUE= .1539E-01 CRITERION= .1043 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 879
 *** TIME = .220114E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2148E-04 OSCILLATION LIMIT = 169.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.613 CRITERION= .1044
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1477
 HT FLOW CONVERGENCE VALUE= .1544E-01 CRITERION= .1040 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 880
 *** TIME = .220903E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2163E-04 OSCILLATION LIMIT = 170.7

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:13:32 JUN 17, 1995 CP= 47911.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr. old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1403

HT FLOW CONVERGENCE VALUE= .1734E-01 CRITERION= .1036 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 881
 *** TIME = .221692E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1401
 HT FLOW CONVERGENCE VALUE= .1736E-01 CRITERION= .1035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 882
 *** TIME = .222481E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1401
 HT FLOW CONVERGENCE VALUE= .1721E-01 CRITERION= .1031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 883
 *** TIME = .223270E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1402
 HT FLOW CONVERGENCE VALUE= .1729E-01 CRITERION= .1029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 884
 *** TIME = .224059E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1402
 HT FLOW CONVERGENCE VALUE= .1713E-01 CRITERION= .1026 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 885
 *** TIME = .224848E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1402
 HT FLOW CONVERGENCE VALUE= .1721E-01 CRITERION= .1024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 886
 *** TIME = .225637E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1224E-04 OSCILLATION LIMIT = 96.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1402
 HT FLOW CONVERGENCE VALUE= .1705E-01 CRITERION= .1020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 887
 *** TIME = .226426E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1403
 HT FLOW CONVERGENCE VALUE= .1712E-01 CRITERION= .1018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 888
 *** TIME = .227215E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1224E-04 OSCILLATION LIMIT = 96.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1024
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1403
 HT FLOW CONVERGENCE VALUE= .1697E-01 CRITERION= .1015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 889
 *** TIME = .228004E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1020
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1704E-01 CRITERION= .1013 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 890
 *** TIME = .228793E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1224E-04 OSCILLATION LIMIT = 96.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1689E-01 CRITERION= .1009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 891
 *** TIME = .229582E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1015
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1696E-01 CRITERION= .1007 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 892
 *** TIME = .230370E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1013
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1680E-01 CRITERION= .1004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 893
 *** TIME = .231159E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1010
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1687E-01 CRITERION= .1002 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 894
 *** TIME = .231948E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1671E-01 CRITERION= .9984E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 895
 *** TIME = .232737E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .1004
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1406
 HT FLOW CONVERGENCE VALUE= .1679E-01 CRITERION= .9965E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 896
 *** TIME = .233526E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.67

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .1003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1406
 HT FLOW CONVERGENCE VALUE= .1663E-01 CRITERION= .9930E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 897
 *** TIME = .234315E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9988E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1407
 HT FLOW CONVERGENCE VALUE= .1671E-01 CRITERION= .9911E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 898
 *** TIME = .235104E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .9972E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1407
 HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .9875E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 899
 *** TIME = .235893E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9934E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1407
 HT FLOW CONVERGENCE VALUE= .1662E-01 CRITERION= .9856E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 900
 *** TIME = .236682E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .9918E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1408
 HT FLOW CONVERGENCE VALUE= .1647E-01 CRITERION= .9821E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 901
 *** TIME = .237471E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9880E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1408
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .9802E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 902
 *** TIME = .238260E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .9864E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1408
 HT FLOW CONVERGENCE VALUE= .1639E-01 CRITERION= .9766E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 903
 *** TIME = .239049E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9826E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1409
 HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .9747E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 904

*** TIME = .239838E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.27 CRITERION= .9810E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1409
 HT FLOW CONVERGENCE VALUE= .1630E-01 CRITERION= .9712E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 905
 *** TIME = .240627E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9772E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1410
 HT FLOW CONVERGENCE VALUE= .1637E-01 CRITERION= .9693E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 906
 *** TIME = .241416E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9756E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1410
 HT FLOW CONVERGENCE VALUE= .1622E-01 CRITERION= .9658E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 907
 *** TIME = .242205E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9718E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1410
 HT FLOW CONVERGENCE VALUE= .1628E-01 CRITERION= .9639E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 908
 *** TIME = .242994E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9702E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1411
 HT FLOW CONVERGENCE VALUE= .1614E-01 CRITERION= .9603E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 909
 *** TIME = .243782E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9664E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1411
 HT FLOW CONVERGENCE VALUE= .1620E-01 CRITERION= .9584E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 910
 *** TIME = .244571E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9647E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1411
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .9549E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 911
 *** TIME = .245360E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1217E-04 OSCILLATION LIMIT = 95.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9610E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1412
 HT FLOW CONVERGENCE VALUE= .1612E-01 CRITERION= .9530E-01 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 912
*** TIME = .246149E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = 96.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9593E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1412
HT FLOW CONVERGENCE VALUE= .1597E-01 CRITERION= .9494E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 913
*** TIME = .246938E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1217E-04 OSCILLATION LIMIT = 96.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9556E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1412
HT FLOW CONVERGENCE VALUE= .1603E-01 CRITERION= .9475E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 914
*** TIME = .247727E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = 96.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9539E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1413
HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .9440E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 915
*** TIME = .248516E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1217E-04 OSCILLATION LIMIT = 96.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9502E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1413
HT FLOW CONVERGENCE VALUE= .1594E-01 CRITERION= .9421E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 916
*** TIME = .249305E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = 96.90
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9485E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1414
HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .9386E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 917
*** TIME = .250094E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1218E-04 OSCILLATION LIMIT = 96.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9448E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1414
HT FLOW CONVERGENCE VALUE= .1586E-01 CRITERION= .9367E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 918
*** TIME = .250883E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1229E-04 OSCILLATION LIMIT = 96.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.28 CRITERION= .9431E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1414
HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .9331E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 919
*** TIME = .251672E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1218E-04 OSCILLATION LIMIT = 96.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.86 CRITERION= .9394E-01

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1415
 HT FLOW CONVERGENCE VALUE= .1577E-01 CRITERION= .9312E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 920
 *** TIME = .252461E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1229E-04 OSCILLATION LIMIT = 96.95

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:50:45 JUN 17, 1995 CP= 50102.370
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.855 CRITERION= .9362E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1127
 HT FLOW CONVERGENCE VALUE= .1290E-01 CRITERION= .9283E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 921
 *** TIME = .253250E+10 TIME INC = .788940E+07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.439 CRITERION= .9330E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1134
 HT FLOW CONVERGENCE VALUE= .1299E-01 CRITERION= .9270E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 922
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+08 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 29.15 CRITERION= .9711E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3509
 HT FLOW CONVERGENCE VALUE= .3883E-01 CRITERION= .9198E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 923
 *** TIME = .256406E+10 TIME INC = .236682E+08
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+08 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 76.97 CRITERION= .1199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9336
 HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .9037E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3951E-01
 HT FLOW CONVERGENCE VALUE= .1738E-02 CRITERION= .9036E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 925
 *** TIME = .262717E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 77.39 CRITERION= .1188
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9509
 HT FLOW CONVERGENCE VALUE= .9998E-01 CRITERION= .8859E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3929E-01
 HT FLOW CONVERGENCE VALUE= .1682E-02 CRITERION= .8858E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 927
 *** TIME = .269029E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.97 CRITERION= .1173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9515
 HT FLOW CONVERGENCE VALUE= .9810E-01 CRITERION= .8698E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3867E-01
 HT FLOW CONVERGENCE VALUE= .1625E-02 CRITERION= .8697E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 929
 *** TIME = .275340E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 77.39 CRITERION= .1163
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9528
 HT FLOW CONVERGENCE VALUE= .9606E-01 CRITERION= .8520E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3803E-01
 HT FLOW CONVERGENCE VALUE= .1562E-02 CRITERION= .8519E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 931
 *** TIME = .281652E+10 TIME INC = .631152E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+08 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= 28.74 CRITERION= .8990E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3579
 HT FLOW CONVERGENCE VALUE= .3592E-01 CRITERION= .8464E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 932
 *** TIME = .284018E+10 TIME INC = .236682E+08
 Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM FROM .31558E+10 TO .31558E+11 BY .31558E+10
 TIME= .31558E+10

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
 LOAD LABELS = TEMP
 VALUES = 182.87 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
 LOAD LABELS = TEMP
 VALUES = 183.14 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
 LOAD LABELS = TEMP
 VALUES = 183.78 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
 CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 50647.890 TIME= 04:00:00
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
 procedure) for ALL DOFs.

***** ANSYS ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:00:00 JUN 17, 1995 CP= 50647.890

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HT FLOW CONVERGENCE VALUE= 72.69 CRITERION= .1083
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8673
HT FLOW CONVERGENCE VALUE= .8181E-01 CRITERION= .7866E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3256E-01
HT FLOW CONVERGENCE VALUE= .1246E-02 CRITERION= .7885E-01 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 940
*** TIME = .307687E+10 TIME INC = .631152E+08
*** AUTO TIME STEP: NEXT TIME INC = .39447E+08 DECREASED (FACTOR = .6250)

HT FLOW CONVERGENCE VALUE= 45.09 CRITERION= .9084E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5423
HT FLOW CONVERGENCE VALUE= .5067E-01 CRITERION= .7799E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 941
*** TIME = .311631E+10 TIME INC = .394470E+08
*** AUTO STEP TIME: NEXT TIME INC = .39447E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.51 CRITERION= .9020E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5226
HT FLOW CONVERGENCE VALUE= .4943E-01 CRITERION= .7696E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 942
*** TIME = .315576E+10 TIME INC = .394470E+08
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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 04:07:54 JUN 17, 1995 CP= 51113.350
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 51.56 CRITERION= .9265E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4927
HT FLOW CONVERGENCE VALUE= .4998E-01 CRITERION= .7622E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 943
*** TIME = .323465E+10 TIME INC = .788940E+08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 51.98 CRITERION= .9216E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4934
HT FLOW CONVERGENCE VALUE= .4928E-01 CRITERION= .7532E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 944
*** TIME = .331355E+10 TIME INC = .788940E+08
*** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)
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HT FLOW CONVERGENCE VALUE= 155.1 CRITERION= .1725
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.519
HT FLOW CONVERGENCE VALUE= .1432 CRITERION= .7295E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5556E-01
HT FLOW CONVERGENCE VALUE= .2049E-02 CRITERION= .7294E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 946
*** TIME = .355023E+10 TIME INC = .236682E+09
*** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 155.5 CRITERION= .1716
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.541
HT FLOW CONVERGENCE VALUE= .1385 CRITERION= .7041E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5428E-01
HT FLOW CONVERGENCE VALUE= .1919E-02 CRITERION= .7040E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 948
*** TIME = .378691E+10 TIME INC = .236682E+09
*** AUTO TIME STEP: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)
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HT FLOW CONVERGENCE VALUE= 414.0 CRITERION= .4200
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.114
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HT FLOW CONVERGENCE VALUE= .3264 CRITERION= .6395E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1302
 HT FLOW CONVERGENCE VALUE= .4004E-02 CRITERION= .6392E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 950
 *** TIME = .441806E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 414.5 CRITERION= .4193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.133
 HT FLOW CONVERGENCE VALUE= .2897 CRITERION= .5729E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1164
 HT FLOW CONVERGENCE VALUE= .3065E-02 CRITERION= .5726E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 952
 *** TIME = .504922E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 414.2 CRITERION= .4182
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.150
 HT FLOW CONVERGENCE VALUE= .2550 CRITERION= .5079E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1010
 HT FLOW CONVERGENCE VALUE= .2366E-02 CRITERION= .5076E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 954
 *** TIME = .568037E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 414.7 CRITERION= .4177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.167
 HT FLOW CONVERGENCE VALUE= .2220 CRITERION= .4412E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8834E-01
 HT FLOW CONVERGENCE VALUE= .1809E-02 CRITERION= .4409E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 956
 *** TIME = .631152E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:18:04 JUN 17, 1995 CP= 51712.570
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 308.6 CRITERION= .3118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.972
 HT FLOW CONVERGENCE VALUE= .1327 CRITERION= .4202E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4658E-01
 HT FLOW CONVERGENCE VALUE= .1101E-02 CRITERION= .4201E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 958
 *** TIME = .694267E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 309.1 CRITERION= .3118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.974
 HT FLOW CONVERGENCE VALUE= .1400 CRITERION= .3978E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4479E-01
 HT FLOW CONVERGENCE VALUE= .1024E-02 CRITERION= .3978E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 960
 *** TIME = .757382E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 308.7 CRITERION= .3113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.978
 HT FLOW CONVERGENCE VALUE= .1416 CRITERION= .3770E-01

EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4295E-01
 HT FLOW CONVERGENCE VALUE= .9564E-03 CRITERION= .3769E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 962
 *** TIME = .820498E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 309.2 CRITERION= .3113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.980
 HT FLOW CONVERGENCE VALUE= .1355 CRITERION= .3546E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4085E-01
 HT FLOW CONVERGENCE VALUE= .8682E-03 CRITERION= .3545E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 964
 *** TIME = .883613E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 308.8 CRITERION= .3109
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.984
 HT FLOW CONVERGENCE VALUE= .1278 CRITERION= .3337E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3867E-01
 HT FLOW CONVERGENCE VALUE= .7871E-03 CRITERION= .3337E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 966
 *** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:25:00 JUN 17, 1995 CP= 52121.740
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 167.8 CRITERION= .1709
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.092
 HT FLOW CONVERGENCE VALUE= .6777E-01 CRITERION= .3208E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2057E-01
 HT FLOW CONVERGENCE VALUE= .4089E-03 CRITERION= .3208E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 968
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.4 CRITERION= .1705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.093
 HT FLOW CONVERGENCE VALUE= .6543E-01 CRITERION= .3095E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1982E-01
 HT FLOW CONVERGENCE VALUE= .3805E-03 CRITERION= .3095E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 970
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.8 CRITERION= .1705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.094
 HT FLOW CONVERGENCE VALUE= .6285E-01 CRITERION= .2966E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1904E-01
 HT FLOW CONVERGENCE VALUE= .3512E-03 CRITERION= .2966E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 972
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.4 CRITERION= .1701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.095
 HT FLOW CONVERGENCE VALUE= .6033E-01 CRITERION= .2853E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1823E-01

HT FLOW CONVERGENCE VALUE= .3250E-03 CRITERION= .2853E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 974
 *** TIME = .119919E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.8 CRITERION= .1701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.096
 HT FLOW CONVERGENCE VALUE= .5777E-01 CRITERION= .2724E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1736E-01
 HT FLOW CONVERGENCE VALUE= .2985E-03 CRITERION= .2724E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 976
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:31:57 JUN 17, 1995 CP= 52531.350
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 110.6 CRITERION= .1140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7159
 HT FLOW CONVERGENCE VALUE= .3717E-01 CRITERION= .2654E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1104E-01
 HT FLOW CONVERGENCE VALUE= .1878E-03 CRITERION= .2654E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 978
 *** TIME = .132542E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 111.1 CRITERION= .1141
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7161
 HT FLOW CONVERGENCE VALUE= .3609E-01 CRITERION= .2568E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1065E-01
 HT FLOW CONVERGENCE VALUE= .1781E-03 CRITERION= .2568E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 980
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 110.7 CRITERION= .1137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7167
 HT FLOW CONVERGENCE VALUE= .3511E-01 CRITERION= .2498E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1032E-01
 HT FLOW CONVERGENCE VALUE= .1685E-03 CRITERION= .2498E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 982
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 111.1 CRITERION= .1137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7170
 HT FLOW CONVERGENCE VALUE= .3401E-01 CRITERION= .2412E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9998E-02
 HT FLOW CONVERGENCE VALUE= .1581E-03 CRITERION= .2412E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 984
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 110.7 CRITERION= .1134
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7175
 HT FLOW CONVERGENCE VALUE= .3299E-01 CRITERION= .2342E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9709E-02
 HT FLOW CONVERGENCE VALUE= .1489E-03 CRITERION= .2342E-01 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 986
*** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 04:38:51 JUN 17, 1995 CP= 52940.140
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 123.6 CRITERION= .1257
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6865
HT FLOW CONVERGENCE VALUE= .3413E-01 CRITERION= .2274E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9579E-02
HT FLOW CONVERGENCE VALUE= .1513E-03 CRITERION= .2274E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 988
*** TIME = .164100E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 123.2 CRITERION= .1254
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6870
HT FLOW CONVERGENCE VALUE= .3330E-01 CRITERION= .2221E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9357E-02
HT FLOW CONVERGENCE VALUE= .1442E-03 CRITERION= .2221E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 990
*** TIME = .170411E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 123.6 CRITERION= .1255
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6872
HT FLOW CONVERGENCE VALUE= .3239E-01 CRITERION= .2153E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9120E-02
HT FLOW CONVERGENCE VALUE= .1365E-03 CRITERION= .2153E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 992
*** TIME = .176723E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 123.2 CRITERION= .1252
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6877
HT FLOW CONVERGENCE VALUE= .3155E-01 CRITERION= .2100E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8894E-02
HT FLOW CONVERGENCE VALUE= .1296E-03 CRITERION= .2100E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 994
*** TIME = .183034E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 123.6 CRITERION= .1253
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6879
HT FLOW CONVERGENCE VALUE= .3063E-01 CRITERION= .2032E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8654E-02
HT FLOW CONVERGENCE VALUE= .1223E-03 CRITERION= .2032E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 996
*** TIME = .189346E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 04:45:46 JUN 17, 1995 CP= 53349.090
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 138.8 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6781
 HT FLOW CONVERGENCE VALUE= .3260E-01 CRITERION= .1994E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8820E-02
 HT FLOW CONVERGENCE VALUE= .1284E-03 CRITERION= .1994E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 998
 *** TIME = .195657E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.2 CRITERION= .1405
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6782
 HT FLOW CONVERGENCE VALUE= .3186E-01 CRITERION= .1941E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8635E-02
 HT FLOW CONVERGENCE VALUE= .1227E-03 CRITERION= .1941E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1000
 *** TIME = .201969E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.8 CRITERION= .1403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6786
 HT FLOW CONVERGENCE VALUE= .3118E-01 CRITERION= .1903E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8462E-02
 HT FLOW CONVERGENCE VALUE= .1177E-03 CRITERION= .1903E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1002
 *** TIME = .208280E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.2 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6788
 HT FLOW CONVERGENCE VALUE= .3043E-01 CRITERION= .1850E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8275E-02
 HT FLOW CONVERGENCE VALUE= .1122E-03 CRITERION= .1850E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1004
 *** TIME = .214592E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.8 CRITERION= .1402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6792
 HT FLOW CONVERGENCE VALUE= .2975E-01 CRITERION= .1812E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8099E-02
 HT FLOW CONVERGENCE VALUE= .1073E-03 CRITERION= .1812E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1006
 *** TIME = .220903E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:52:40 JUN 17, 1995 CP= 53757.030
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 148.8 CRITERION= .1498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6820
 HT FLOW CONVERGENCE VALUE= .3065E-01 CRITERION= .1766E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8186E-02
 HT FLOW CONVERGENCE VALUE= .1085E-03 CRITERION= .1766E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1008
 *** TIME = .227215E+11 TIME INC = .631152E+09

*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 148.4 CRITERION= .1496
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6824
 HT FLOW CONVERGENCE VALUE= .3004E-01 CRITERION= .1735E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8035E-02
 HT FLOW CONVERGENCE VALUE= .1045E-03 CRITERION= .1735E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1010
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 148.8 CRITERION= .1498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6825
 HT FLOW CONVERGENCE VALUE= .2938E-01 CRITERION= .1688E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7872E-02
 HT FLOW CONVERGENCE VALUE= .9993E-04 CRITERION= .1688E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1012
 *** TIME = .239838E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 148.4 CRITERION= .1495
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6828
 HT FLOW CONVERGENCE VALUE= .2877E-01 CRITERION= .1658E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7719E-02
 HT FLOW CONVERGENCE VALUE= .9598E-04 CRITERION= .1658E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1014
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 148.9 CRITERION= .1497
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6830
 HT FLOW CONVERGENCE VALUE= .2811E-01 CRITERION= .1611E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7554E-02
 HT FLOW CONVERGENCE VALUE= .9161E-04 CRITERION= .1611E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1016
 *** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:59:36 JUN 17, 1995 CP= 54166.450
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 141.4 CRITERION= .1424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6246
 HT FLOW CONVERGENCE VALUE= .2608E-01 CRITERION= .1588E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6922E-02
 HT FLOW CONVERGENCE VALUE= .8390E-04 CRITERION= .1588E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1018
 *** TIME = .258772E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 141.8 CRITERION= .1426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6246
 HT FLOW CONVERGENCE VALUE= .2558E-01 CRITERION= .1550E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6799E-02
 HT FLOW CONVERGENCE VALUE= .8070E-04 CRITERION= .1550E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1020
 *** TIME = .265086E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 141.4 CRITERION= .1424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6249
 HT FLOW CONVERGENCE VALUE= .2512E-01 CRITERION= .1527E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6687E-02
 HT FLOW CONVERGENCE VALUE= .7799E-04 CRITERION= .1527E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1022
 *** TIME = .271395E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 141.9 CRITERION= .1426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6250
 HT FLOW CONVERGENCE VALUE= .2462E-01 CRITERION= .1488E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6564E-02
 HT FLOW CONVERGENCE VALUE= .7490E-04 CRITERION= .1488E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1024
 *** TIME = .277707E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 141.5 CRITERION= .1423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6253
 HT FLOW CONVERGENCE VALUE= .2416E-01 CRITERION= .1465E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6450E-02
 HT FLOW CONVERGENCE VALUE= .7226E-04 CRITERION= .1465E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1026
 *** TIME = .284018E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:06:32 JUN 17, 1995 CP= 54575.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 127.6 CRITERION= .1283
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5510
 HT FLOW CONVERGENCE VALUE= .2126E-01 CRITERION= .1432E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5647E-02
 HT FLOW CONVERGENCE VALUE= .6260E-04 CRITERION= .1432E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1028
 *** TIME = .290330E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 127.2 CRITERION= .1281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5513
 HT FLOW CONVERGENCE VALUE= .2093E-01 CRITERION= .1415E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5565E-02
 HT FLOW CONVERGENCE VALUE= .6077E-04 CRITERION= .1415E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1030
 *** TIME = .296641E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 127.6 CRITERION= .1283
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5513
 HT FLOW CONVERGENCE VALUE= .2056E-01 CRITERION= .1382E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5474E-02
 HT FLOW CONVERGENCE VALUE= .5861E-04 CRITERION= .1382E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1032
 *** TIME = .302953E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 127.2 CRITERION= .1280
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5515
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .1365E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5391E-02
 HT FLOW CONVERGENCE VALUE= .5683E-04 CRITERION= .1365E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1034
 *** TIME = .309264E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 127.6 CRITERION= .1282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5515
 HT FLOW CONVERGENCE VALUE= .1985E-01 CRITERION= .1332E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5299E-02
 HT FLOW CONVERGENCE VALUE= .5474E-04 CRITERION= .1332E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1036
 *** TIME = .315576E+11 TIME INC = .631152E+09

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 54983.060

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44x.db
 FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:13:31 JUN 17, 1995 CP= 54988.720
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	1136 TEMP	peakclad	159.0	.3156E+11	257.1	.2525E+09

*GET TMTMAX FROM VARI 2 ITEM=EXTR TMAX VALUE= 252460832.

***** ROUTINE COMPLETED ***** CP = 54988.980

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:13:32 JUN 17, 1995 CP= 54989.010
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****
Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .25246E+09

SET COMMAND GOT LOAD STEP= 20 SUBSTEP= 40 CUMULATIVE ITERATION= 560
TIME/FREQUENCY= .25246E+09

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (8.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at Time of Peak Temp. (8.000001 years)

*** WARNING *** CP= 55018.920 TIME= 05:14:04
The selected element set contains mixed materials.
This could invalidate error estimation.
Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 640
TIME/FREQUENCY= .31558E+09

TITLE=
44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 162.10 BY .85114 TO 270.20

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 10 years

*** WARNING *** CP= 55056.190 TIME= 05:14:43
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 800
TIME/FREQUENCY= .15779E+10

TITLE=
44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 162.10 BY .85114 TO 270.20

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 55093.280 TIME= 05:15:20
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 7 CUMULATIVE ITERATION= 942
TIME/FREQUENCY= .31558E+10

TITLE=
44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 162.10 BY .85114 TO 270.20

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 55129.530 TIME= 05:15:57
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP= 55138.140

Set some needed variable values:

PARAMETER DATM = .9000000E-01
 PARAMETER DAT1 = .2500000
 PARAMETER DAT2 = .4100000
 PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
 Save profile from center to edge

Variable Legend: A01i000

c = center of assembly
 h = halfway between center and tube
 s = inside structural stainless tube layer
 t = stainless tube cladding
 g = tube guide
 i = inner barrier of DC
 o = outer barrier of DC
 ## = ID number of assembly (01 is center)
 i = side of assembly toward center of WP
 o = side of assembly toward edge of WP
 000 = profile center down
 045 = profile 45 deg down
 090 = profile center side
 135 = profile 45 deg up
 180 = profile center up

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:05 JUN 17, 1995 CP= 55138.150
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2	IS AT NODE 3544	ITEM= TEMP COMP=	NAME= ts1i000
VARIABLE 3	IS AT NODE 1094	ITEM= TEMP COMP=	NAME= t01i000
VARIABLE 4	IS AT NODE 1101	ITEM= TEMP COMP=	NAME= s01i000
VARIABLE 5	IS AT NODE 1138	ITEM= TEMP COMP=	NAME= h01i000
VARIABLE 6	IS AT NODE 1136	ITEM= TEMP COMP=	NAME= c01i000
VARIABLE 7	IS AT NODE 1134	ITEM= TEMP COMP=	NAME= h01o000
VARIABLE 8	IS AT NODE 1055	ITEM= TEMP COMP=	NAME= s01o000
VARIABLE 9	IS AT NODE 1047	ITEM= TEMP COMP=	NAME= t01o000
VARIABLE 10	IS AT NODE 1246	ITEM= TEMP COMP=	NAME= s09t000

VARIABLE 11 IS AT NODE 1283 ITEM= TEMP COMP= NAME= h09i000
 VARIABLE 12 IS AT NODE 1281 ITEM= TEMP COMP= NAME= c09i000
 VARIABLE 13 IS AT NODE 1279 ITEM= TEMP COMP= NAME= h09o000
 VARIABLE 14 IS AT NODE 1200 ITEM= TEMP COMP= NAME= s09o000
 VARIABLE 15 IS AT NODE 1192 ITEM= TEMP COMP= NAME= t09o000
 VARIABLE 16 IS AT NODE 1391 ITEM= TEMP COMP= NAME= s15i000
 VARIABLE 17 IS AT NODE 1428 ITEM= TEMP COMP= NAME= h15i000
 VARIABLE 18 IS AT NODE 1426 ITEM= TEMP COMP= NAME= c15i000
 VARIABLE 19 IS AT NODE 1424 ITEM= TEMP COMP= NAME= h15o000
 VARIABLE 20 IS AT NODE 1345 ITEM= TEMP COMP= NAME= s15o000
 VARIABLE 21 IS AT NODE 1337 ITEM= TEMP COMP= NAME= t15o000
 VARIABLE 22 IS AT NODE 1536 ITEM= TEMP COMP= NAME= s21i000
 VARIABLE 23 IS AT NODE 1573 ITEM= TEMP COMP= NAME= h21i000
 VARIABLE 24 IS AT NODE 1571 ITEM= TEMP COMP= NAME= c21i000
 VARIABLE 25 IS AT NODE 1569 ITEM= TEMP COMP= NAME= h21o000
 VARIABLE 26 IS AT NODE 1490 ITEM= TEMP COMP= NAME= s21o000
 VARIABLE 27 IS AT NODE 1482 ITEM= TEMP COMP= NAME= t21o000
 VARIABLE 28 IS AT NODE 4217 ITEM= TEMP COMP= NAME= i21i000
 VARIABLE 29 IS AT NODE 4207 ITEM= TEMP COMP= NAME= i21o000
 VARIABLE 30 IS AT NODE 4437 ITEM= TEMP COMP= NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts1i000	139.8	.1000E-05	239.8	.3156E+09
3	NSOL	1094 TEMP	t01i000	139.8	.1000E-05	239.8	.3156E+09
4	NSOL	1101 TEMP	s01i000	139.9	.1000E-05	239.9	.3156E+09
5	NSOL	1138 TEMP	h01i000	158.6	.3156E+11	251.1	.2525E+09
6	NSOL	1136 TEMP	c01i000	159.0	.3156E+11	257.1	.2525E+09
7	NSOL	1134 TEMP	h01o000	159.1	.3156E+11	259.2	.2525E+09
8	NSOL	1055 TEMP	s01o000	159.0	.3156E+11	257.4	.2525E+09
9	NSOL	1047 TEMP	t01o000	159.0	.3156E+11	257.4	.2525E+09
10	NSOL	1246 TEMP	s09i000	159.0	.3156E+11	257.4	.2525E+09
11	NSOL	1283 TEMP	h09i000	159.2	.3156E+11	260.6	.2525E+09
12	NSOL	1281 TEMP	c09i000	159.2	.3156E+11	260.3	.2525E+09
13	NSOL	1279 TEMP	h09o000	159.0	.3156E+11	256.7	.2525E+09
14	NSOL	1200 TEMP	s09o000	158.6	.3156E+11	249.4	.2525E+09
15	NSOL	1192 TEMP	t09o000	158.6	.3156E+11	249.4	.2525E+09
16	NSOL	1391 TEMP	s15i000	158.6	.3156E+11	249.4	.2525E+09
17	NSOL	1428 TEMP	h15i000	158.5	.3156E+11	247.8	.2525E+09
18	NSOL	1426 TEMP	c15i000	153.5	.1000E-05	242.6	.2525E+09
19	NSOL	1424 TEMP	h15o000	141.1	.1000E-05	234.4	.3156E+09
20	NSOL	1345 TEMP	s15o000	121.5	.1000E-05	223.7	.6312E+09
21	NSOL	1337 TEMP	t15o000	121.5	.1000E-05	223.6	.6312E+09
22	NSOL	1536 TEMP	s21i000	121.4	.1000E-05	223.6	.6312E+09
23	NSOL	1573 TEMP	h21i000	118.8	.1000E-05	221.6	.9467E+09
24	NSOL	1571 TEMP	c21i000	109.7	.1000E-05	217.3	.9467E+09
25	NSOL	1569 TEMP	h21o000	93.87	.1000E-05	210.7	.9467E+09
26	NSOL	1490 TEMP	s21o000	67.47	.1000E-05	200.5	.1262E+10

27 NSOL	1482 TEMP	t21o000	67.37	.1000E-05	200.4	.1262E+10
28 NSOL	4217 TEMP	i21i000	31.27	.1000E-05	191.1	.1578E+10
29 NSOL	4207 TEMP	i21o000	30.37	.1000E-05	190.7	.1578E+10
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	189.2	.1578E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:16:09 JUN 17, 1995 CP= 55142.030
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.425	177.436	177.538	194.903	203.915	206.960
31.558	177.426	177.436	177.539	194.903	203.915	206.960
.31558E+07	202.523	202.534	202.632	218.649	226.998	229.880
.63116E+07	208.235	208.246	208.344	224.061	232.270	235.104
.94673E+07	211.687	211.698	211.795	227.279	235.374	238.170
.12623E+08	214.234	214.245	214.341	229.635	237.637	240.402
.15779E+08	216.244	216.254	216.350	231.485	239.408	242.145
.18935E+08	217.906	217.917	218.012	233.008	240.861	243.575
.22090E+08	219.308	219.318	219.413	234.284	242.076	244.767
.25246E+08	220.475	220.486	220.580	235.340	243.076	245.749
.28402E+08	221.505	221.516	221.609	236.266	243.950	246.605
.31558E+08	222.434	222.445	222.538	237.096	244.731	247.369
.63115E+08	228.520	228.531	228.620	242.428	249.683	252.187
.94673E+08	231.877	231.887	231.973	245.219	252.186	254.587
.12623E+09	234.305	234.315	234.398	247.179	253.905	256.221
.15779E+09	236.352	236.361	236.442	248.829	255.349	257.593
.18935E+09	237.707	237.716	237.795	249.806	256.131	258.305
.22090E+09	238.733	238.742	238.819	250.511	256.670	258.787
.25246E+09	239.646	239.654	239.730	251.129	257.135	259.198
.28402E+09	239.691	239.699	239.773	250.922	256.798	258.815
.31558E+09	239.794	239.802	239.875	250.813	256.580	258.557
.63115E+09	238.011	238.018	238.078	247.132	251.920	253.552
.94673E+09	235.775	235.781	235.830	243.483	247.537	248.913
.12623E+10	230.936	230.941	230.984	237.621	241.139	242.328
.15779E+10	225.628	225.632	225.669	231.482	234.565	235.604
.18935E+10	220.807	220.811	220.844	226.009	228.752	229.674
.22090E+10	216.312	216.316	216.345	220.984	223.448	224.276
.25246E+10	211.799	211.802	211.828	216.041	218.280	219.030
.28402E+10	208.129	208.132	208.156	212.027	214.085	214.774
.31558E+10	204.779	204.781	204.803	208.362	210.255	210.889
.63115E+10	188.485	188.486	188.499	190.645	191.790	192.171
.94673E+10	180.119	180.120	180.129	181.790	182.676	182.971
.12623E+11	175.514	175.515	175.523	176.901	177.636	177.881
.15779E+11	172.494	172.494	172.501	173.693	174.329	174.541
.18935E+11	169.501	169.502	169.508	170.555	171.114	171.299
.22090E+11	166.450	166.450	166.455	167.393	167.894	168.060
.25246E+11	163.330	163.331	163.335	164.181	164.632	164.781
.28402E+11	160.442	160.443	160.447	161.218	161.630	161.766
.31558E+11	157.880	157.881	157.885	158.595	158.974	159.099

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:16:09 JUN 17, 1995 CP= 55142.050
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	204.075	204.073	204.088	209.673	209.735	204.972
31.558	204.075	204.073	204.088	209.673	209.734	204.972
.31558E+07	227.352	227.350	227.364	232.287	232.182	227.665
.63116E+07	232.616	232.614	232.628	237.424	237.276	232.787
.94673E+07	235.719	235.717	235.730	240.426	240.247	235.788
.12623E+08	237.981	237.979	237.992	242.606	242.405	237.973
.15779E+08	239.753	239.750	239.764	244.308	244.090	239.681
.18935E+08	241.202	241.200	241.213	245.703	245.470	241.083
.22090E+08	242.415	242.413	242.426	246.864	246.619	242.253
.25246E+08	243.414	243.411	243.424	247.820	247.566	243.219
.28402E+08	244.286	244.283	244.296	248.652	248.390	244.063
.31558E+08	245.063	245.061	245.074	249.393	249.124	244.815
.63115E+08	249.993	249.991	250.003	254.049	253.737	249.584
.94673E+08	252.477	252.474	252.486	256.337	256.005	251.982
.12623E+09	254.180	254.177	254.188	257.884	257.539	253.630
.15779E+09	255.611	255.608	255.619	259.183	258.829	255.018
.18935E+09	256.380	256.377	256.388	259.832	259.476	255.763
.22090E+09	256.908	256.905	256.915	260.261	259.904	256.276
.25246E+09	257.362	257.360	257.369	260.625	260.268	256.719
.28402E+09	257.014	257.011	257.021	260.206	259.853	256.375
.31558E+09	256.786	256.783	256.793	259.918	259.569	256.151
.63115E+09	252.050	252.048	252.055	254.666	254.371	251.512
.94673E+09	247.621	247.619	247.626	249.851	249.602	247.172
.12623E+10	241.190	241.189	241.194	243.152	242.950	240.847
.15779E+10	234.596	234.595	234.599	236.339	236.178	234.346
.18935E+10	228.770	228.769	228.774	230.339	230.209	228.589
.22090E+10	223.459	223.458	223.462	224.885	224.780	223.334
.25246E+10	218.283	218.283	218.286	219.593	219.508	218.203
.28402E+10	214.084	214.083	214.087	215.299	215.229	214.035
.31558E+10	210.252	210.252	210.255	211.379	211.321	210.229
.63115E+10	191.778	191.777	191.779	192.486	192.471	191.826
.94673E+10	182.664	182.664	182.665	183.223	183.219	182.727
.12623E+11	177.625	177.625	177.626	178.093	178.094	177.689
.15779E+11	174.318	174.318	174.319	174.726	174.729	174.380
.18935E+11	171.103	171.102	171.103	171.464	171.468	171.163
.22090E+11	167.883	167.882	167.883	168.209	168.214	167.942
.25246E+11	164.620	164.620	164.621	164.916	164.923	164.679
.28402E+11	161.618	161.618	161.619	161.890	161.898	161.676
.31558E+11	158.963	158.963	158.963	159.215	159.223	159.019

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:09 JUN 17, 1995 CP= 55142.060
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09o000	1192 TEMP t09o000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15o000
.10000E-05	160.099	160.063	160.046	159.959	153.465	141.139
.20000E-05	194.471	194.434	194.415	193.499	186.932	175.218
31.558	194.471	194.434	194.415	193.499	186.932	175.218
.31558E+07	217.929	217.892	217.873	216.573	210.128	198.978
.63116E+07	223.175	223.139	223.119	221.747	215.319	204.278
.94673E+07	226.284	226.247	226.227	224.803	218.399	207.455
.12623E+08	228.557	228.520	228.500	227.038	220.659	209.798
.15779E+08	230.343	230.306	230.286	228.792	222.438	211.652
.18935E+08	231.809	231.773	231.752	230.241	223.909	213.190
.22090E+08	233.041	233.004	232.984	231.454	225.146	214.488
.25246E+08	234.063	234.026	234.006	232.463	226.179	215.578

.28402E+08	234.958	234.921	234.901	233.348	227.086	216.540
.31558E+08	235.760	235.724	235.704	234.141	227.901	217.408
.63115E+08	240.924	240.889	240.869	239.262	233.219	223.152
.94673E+08	243.632	243.598	243.579	241.964	236.093	226.369
.12623E+09	245.543	245.510	245.491	243.880	238.163	228.734
.15779E+09	247.158	247.126	247.107	245.503	239.920	230.744
.18935E+09	248.125	248.093	248.075	246.490	241.045	232.122
.22090E+09	248.825	248.794	248.776	247.211	241.887	233.180
.25246E+09	249.443	249.412	249.395	247.848	242.637	234.131
.28402E+09	249.250	249.220	249.203	247.684	242.579	234.253
.31558E+09	249.153	249.124	249.107	247.610	242.595	234.421
.63115E+09	245.679	245.655	245.641	244.392	240.221	233.446
.94673E+09	242.223	242.202	242.191	241.139	237.611	231.889
.12623E+10	236.553	236.536	236.526	235.645	232.611	227.676
.15779E+10	230.591	230.576	230.567	229.829	227.200	222.909
.18935E+10	225.258	225.245	225.237	224.610	222.298	218.511
.22090E+10	220.347	220.335	220.329	219.790	217.737	214.358
.25246E+10	215.496	215.486	215.480	215.014	213.170	210.123
.28402E+10	211.552	211.542	211.537	211.126	209.447	206.663
.31558E+10	207.949	207.941	207.936	207.573	206.042	203.495
.63115E+10	190.460	190.455	190.453	190.276	189.390	187.891
.94673E+10	181.674	181.671	181.669	181.549	180.879	179.734
.12623E+11	176.818	176.815	176.813	176.722	176.173	175.230
.15779E+11	173.628	173.625	173.624	173.550	173.079	172.267
.18935E+11	170.503	170.500	170.499	170.439	170.029	169.319
.22090E+11	167.351	167.349	167.348	167.298	166.934	166.301
.25246E+11	164.147	164.145	164.144	164.102	163.777	163.210
.28402E+11	161.191	161.189	161.189	161.154	160.860	160.344
.31558E+11	158.573	158.572	158.571	158.542	158.273	157.800

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:09 JUN 17, 1995 CP= 55142.070
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
.10000E-05	121.540	121.480	121.445	118.820	109.671	93.8704
.20000E-05	157.163	157.102	157.065	153.931	145.114	130.392
31.558	157.163	157.102	157.065	153.931	145.114	130.392
.31558E+07	182.137	182.076	182.038	178.672	170.260	156.467
.63116E+07	187.654	187.593	187.555	184.149	175.805	162.190
.94673E+07	191.018	190.957	190.919	187.489	179.207	165.739
.12623E+08	193.520	193.460	193.422	189.976	181.748	168.405
.15779E+08	195.511	195.451	195.413	191.957	183.780	170.545
.18935E+08	197.173	197.114	197.076	193.617	185.484	172.345
.22090E+08	198.586	198.527	198.489	195.027	186.939	173.888
.25246E+08	199.782	199.723	199.686	196.225	188.178	175.209
.28402E+08	200.842	200.784	200.746	197.288	189.281	176.390
.31558E+08	201.805	201.747	201.709	198.255	190.286	177.470
.63115E+08	208.291	208.234	208.198	204.804	197.157	184.937
.94673E+08	212.080	212.025	211.989	208.664	201.288	189.536
.12623E+09	214.927	214.873	214.839	211.580	204.438	193.087
.15779E+09	217.346	217.294	217.260	214.061	207.118	196.111
.18935E+09	219.122	219.072	219.038	215.907	209.163	198.496
.22090E+09	220.519	220.470	220.437	217.367	210.793	200.414
.25246E+09	221.784	221.735	221.704	218.691	212.274	202.162
.28402E+09	222.180	222.133	222.102	219.148	212.873	202.994
.31558E+09	222.577	222.530	222.500	219.596	213.439	203.757
.63115E+09	223.684	223.646	223.621	221.208	216.140	208.213
.94673E+09	223.673	223.641	223.620	221.584	217.326	210.691
.12623E+10	220.594	220.566	220.548	218.813	215.159	209.466
.15779E+10	216.746	216.723	216.707	215.221	212.059	207.127

.18935E+10	213.067	213.046	213.032	211.740	208.961	204.620
.22090E+10	209.496	209.478	209.466	208.331	205.861	201.997
.25246E+10	205.731	205.714	205.704	204.696	202.476	198.995
.28402E+10	202.643	202.628	202.618	201.709	199.685	196.507
.31558E+10	199.813	199.799	199.790	198.967	197.120	194.218
.63115E+10	185.714	185.707	185.702	185.247	184.174	182.476
.94673E+10	178.063	178.057	178.054	177.718	176.903	175.605
.12623E+11	173.851	173.846	173.843	173.573	172.903	171.835
.15779E+11	171.078	171.074	171.071	170.842	170.267	169.347
.18935E+11	168.278	168.274	168.272	168.075	167.573	166.768
.22090E+11	165.370	165.367	165.365	165.192	164.745	164.027
.25246E+11	162.373	162.370	162.368	162.216	161.816	161.171
.28402E+11	159.582	159.580	159.578	159.442	159.079	158.493
.31558E+11	157.100	157.098	157.096	156.973	156.641	156.103

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:09 JUN 17, 1995 CP= 55142.090
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21i000	i21o000	o21o000
.10000E-05	67.4744	67.3673	31.2684	30.3726	26.1379
.20000E-05	106.048	105.935	74.3250	73.3380	69.2494
31.558	106.048	105.935	74.3250	73.3380	69.2494
.31558E+07	133.781	133.666	105.647	104.627	100.765
.63116E+07	139.842	139.728	112.434	111.411	107.552
.94673E+07	143.662	143.548	116.777	115.754	111.916
.12623E+08	146.563	146.449	120.109	119.087	115.268
.15779E+08	148.903	148.790	122.804	121.784	117.987
.18935E+08	150.886	150.772	125.108	124.092	120.309
.22090E+08	152.596	152.483	127.099	126.086	122.322
.25246E+08	154.070	153.957	128.829	127.820	124.072
.28402E+08	155.392	155.279	130.386	129.379	125.648
.31558E+08	156.610	156.498	131.827	130.825	127.109
.63115E+08	165.143	165.034	142.034	141.063	137.482
.94673E+08	170.568	170.462	148.681	147.738	144.272
.12623E+09	174.809	174.705	153.916	152.998	149.632
.15779E+09	178.419	178.318	158.356	157.460	154.179
.18935E+09	181.370	181.272	162.082	161.210	158.017
.22090E+09	183.768	183.672	165.126	164.274	161.157
.25246E+09	185.957	185.863	167.904	167.070	164.024
.28402E+09	187.175	187.083	169.610	168.794	165.814
.31558E+09	188.261	188.170	171.103	170.302	167.377
.63115E+09	195.606	195.531	181.932	181.270	178.861
.94673E+09	200.191	200.128	188.952	188.395	186.373
.12623E+10	200.483	200.430	190.922	190.445	188.716
.15779E+10	199.359	199.312	191.113	190.703	189.214
.18935E+10	197.793	197.752	190.554	190.196	188.893
.22090E+10	195.926	195.890	189.489	189.173	188.021
.25246E+10	193.533	193.501	187.734	187.451	186.420
.28402E+10	191.525	191.496	186.227	185.971	185.034
.31558E+10	189.668	189.642	184.823	184.590	183.739
.63115E+10	179.816	179.801	176.961	176.830	176.344
.94673E+10	173.572	173.561	171.375	171.277	170.911
.12623E+11	170.159	170.150	168.343	168.263	167.964
.15779E+11	167.905	167.897	166.337	166.268	166.013
.18935E+11	165.506	165.499	164.131	164.071	163.849
.22090E+11	162.900	162.894	161.668	161.615	161.419
.25246E+11	160.158	160.153	159.048	159.001	158.825
.28402E+11	157.572	157.567	156.558	156.516	156.357
.31558E+11	155.257	155.253	154.325	154.286	154.140

* Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 55142.230 TIME= 05:16:09
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045
 VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045
 VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045
 VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045
 VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045
 VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045
 VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045
 VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045
 VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045
 VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045
 VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045
 VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045
 VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045
 VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045
 VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045
 VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045
 VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045
 VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045
 VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045
 VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045
 VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045
 VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3526 TEMP	ts1i045	140.1	.1000E-05	240.1	.3156E+09
3	NSOL	1017 TEMP	t01i045	140.1	.1000E-05	240.1	.3156E+09
4	NSOL	1025 TEMP	s01i045	140.1	.1000E-05	240.1	.3156E+09
5	NSOL	1124 TEMP	h01i045	153.5	.1000E-05	247.7	.2525E+09
6	NSOL	1136 TEMP	c01i045	159.0	.3156E+11	257.1	.2525E+09
7	NSOL	1148 TEMP	h01o045	159.3	.3156E+11	262.6	.2525E+09
8	NSOL	1051 TEMP	s01o045	159.4	.3156E+11	264.8	.2525E+09
9	NSOL	1043 TEMP	t01o045	159.5	.3156E+11	265.0	.2525E+09
10	NSOL	2040 TEMP	s11i045	159.5	.3156E+11	265.2	.2525E+09

11 NSOL	2139 TEMP	h11i045	159.8	.3156E+11	269.7	.2525E+09
12 NSOL	2151 TEMP	c11i045	159.8	.3156E+11	268.9	.2525E+09
13 NSOL	2163 TEMP	h11o045	159.4	.3156E+11	260.9	.2525E+09
14 NSOL	2066 TEMP	s11o045	158.6	.3156E+11	247.4	.2525E+09
15 NSOL	2058 TEMP	t11o045	158.5	.3156E+11	246.7	.2525E+09
16 NSOL	2910 TEMP	s19i045	158.5	.3156E+11	246.1	.2525E+09
17 NSOL	3009 TEMP	h19i045	149.5	.1000E-05	234.7	.3156E+09
18 NSOL	3021 TEMP	c19i045	124.4	.1000E-05	220.5	.9467E+09
19 NSOL	3033 TEMP	h19o045	83.69	.1000E-05	204.9	.9467E+09
20 NSOL	2936 TEMP	s19o045	35.99	.1000E-05	191.4	.1578E+10
21 NSOL	2928 TEMP	t19o045	34.48	.1000E-05	191.0	.1578E+10
22 NSOL	4182 TEMP	i19o045	29.81	.1000E-05	189.9	.1578E+10
23 NSOL	4411 TEMP	o19o045	26.14	.1000E-05	188.8	.1578E+10
24 NSOL	2876 TEMP	c13i045	158.3	.3156E+11	242.2	.2525E+09
25 NSOL	2296 TEMP	c17i045	158.3	.3156E+11	242.5	.2525E+09
26 NSOL	1490 TEMP	s21o000	67.47	.1000E-05	200.5	.1262E+10
27 NSOL	1482 TEMP	t21o000	67.37	.1000E-05	200.4	.1262E+10
28 NSOL	4217 TEMP	i21i000	31.27	.1000E-05	191.1	.1578E+10
29 NSOL	4207 TEMP	i21o000	30.37	.1000E-05	190.7	.1578E+10
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	189.2	.1578E+10

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 05:16:13 JUN 17, 1995 CP= 55145.320
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	140.119	140.119	140.125	153.480	169.379	178.567
.20000E-05	177.766	177.766	177.772	189.625	203.915	212.256
31.558	177.766	177.766	177.772	189.625	203.915	212.255
.31558E+07	202.884	202.893	202.902	213.830	226.998	234.725
.63116E+07	208.596	208.605	208.614	219.333	232.270	239.868
.94673E+07	212.046	212.055	212.064	222.621	235.374	242.867
.12623E+08	214.592	214.601	214.610	225.034	237.637	245.044
.15779E+08	216.600	216.609	216.617	226.931	239.408	246.740
.18935E+08	218.261	218.270	218.279	228.497	240.861	248.130
.22090E+08	219.661	219.670	219.679	229.810	242.076	249.285
.25246E+08	220.827	220.836	220.845	230.900	243.076	250.233
.28402E+08	221.856	221.865	221.873	231.857	243.950	251.059
.31558E+08	222.784	222.793	222.801	232.717	244.731	251.792
.63115E+08	228.857	228.866	228.874	238.274	249.683	256.380
.94673E+08	232.203	232.211	232.219	241.234	252.186	258.607
.12623E+09	234.622	234.630	234.638	243.334	253.905	260.098
.15779E+09	236.660	236.668	236.675	245.102	255.349	261.348
.18935E+09	238.008	238.015	238.023	246.192	256.131	261.945
.22090E+09	239.026	239.034	239.041	246.993	256.670	262.329
.25246E+09	239.933	239.940	239.947	247.699	257.135	262.650
.28402E+09	239.971	239.979	239.985	247.567	256.798	262.191
.31558E+09	240.069	240.076	240.083	247.521	256.580	261.869
.63115E+09	238.237	238.243	238.249	244.405	251.920	256.291
.94673E+09	235.964	235.969	235.974	241.178	247.537	251.228
.12623E+10	231.098	231.103	231.107	235.620	241.139	244.333
.15779E+10	225.767	225.771	225.775	229.729	234.565	237.358
.18935E+10	220.930	220.933	220.936	224.451	228.752	231.232
.22090E+10	216.421	216.424	216.427	219.584	223.448	225.675
.25246E+10	211.897	211.899	211.902	214.769	218.280	220.300
.28402E+10	208.218	208.220	208.223	210.857	214.085	215.941
.31558E+10	204.859	204.862	204.864	207.287	210.255	211.962
.63115E+10	188.531	188.533	188.534	189.996	191.790	192.818
.94673E+10	180.154	180.155	180.156	181.287	182.676	183.472
.12623E+11	175.543	175.544	175.545	176.484	177.636	178.296
.15779E+11	172.518	172.519	172.520	173.332	174.329	174.899

.18935E+11	169.523	169.524	169.524	170.238	171.114	171.613
.22090E+11	166.469	166.470	166.470	167.110	167.894	168.341
.25246E+11	163.347	163.348	163.348	163.925	164.632	165.034
.28402E+11	160.458	160.458	160.459	160.985	161.630	161.997
.31558E+11	157.895	157.895	157.896	158.380	158.974	159.312

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:13 JUN 17, 1995 CP= 55145.330
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.840	183.231	183.598	193.136	194.679	184.695
.20000E-05	215.951	216.284	216.594	224.579	225.155	215.172
31.558	215.951	216.284	216.594	224.579	225.154	215.172
.31558E+07	238.062	238.357	238.632	245.601	245.599	235.791
.63116E+07	243.114	243.402	243.669	250.456	250.344	240.539
.94673E+07	246.052	246.334	246.596	253.232	253.040	243.270
.12623E+08	248.179	248.457	248.714	255.228	254.976	245.242
.15779E+08	249.837	250.111	250.364	256.775	256.479	246.779
.18935E+08	251.186	251.457	251.707	258.035	257.698	248.035
.22090E+08	252.309	252.576	252.824	259.074	258.707	249.077
.25246E+08	253.227	253.492	253.737	259.922	259.528	249.933
.28402E+08	254.025	254.287	254.530	260.655	260.239	250.677
.31558E+08	254.732	254.992	255.233	261.302	260.865	251.336
.63115E+08	259.125	259.369	259.593	265.255	264.689	255.447
.94673E+08	261.212	261.444	261.657	267.034	266.401	257.407
.12623E+09	262.588	262.810	263.014	268.164	267.487	258.713
.15779E+09	263.742	263.956	264.152	269.112	268.401	259.819
.18935E+09	264.251	264.457	264.646	269.434	268.705	260.321
.22090E+09	264.560	264.760	264.943	269.588	268.847	260.637
.25246E+09	264.813	265.007	265.185	269.700	268.949	260.901
.28402E+09	264.298	264.488	264.662	269.075	268.329	260.431
.31558E+09	263.930	264.116	264.286	268.614	267.870	260.100
.63115E+09	257.952	258.105	258.245	261.840	261.183	254.630
.94673E+09	252.605	252.734	252.852	255.909	255.338	249.731
.12623E+10	245.516	245.628	245.731	248.419	247.947	243.079
.15779E+10	238.388	238.487	238.578	240.966	240.583	236.335
.18935E+10	232.144	232.233	232.314	234.464	234.151	230.393
.22090E+10	226.495	226.575	226.648	228.603	228.345	224.987
.25246E+10	221.046	221.119	221.186	222.983	222.772	219.741
.28402E+10	216.627	216.694	216.757	218.423	218.247	215.475
.31558E+10	212.593	212.656	212.713	214.260	214.112	211.574
.63115E+10	193.201	193.239	193.275	194.251	194.206	192.708
.94673E+10	183.770	183.801	183.829	184.599	184.583	183.440
.12623E+11	178.544	178.570	178.593	179.240	179.235	178.294
.15779E+11	175.114	175.136	175.157	175.720	175.721	174.911
.18935E+11	171.802	171.822	171.840	172.338	172.344	171.636
.22090E+11	168.510	168.528	168.544	168.994	169.003	168.373
.25246E+11	165.187	165.202	165.217	165.626	165.638	165.073
.28402E+11	162.136	162.150	162.164	162.540	162.553	162.041
.31558E+11	159.439	159.453	159.465	159.814	159.829	159.360

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:13 JUN 17, 1995 CP= 55145.340
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	166.036	165.210	164.357	149.513	124.435	83.6931
.20000E-05	197.176	196.363	195.525	180.705	156.919	119.974
31.558	197.176	196.364	195.525	180.704	156.919	119.974
.31558E+07	218.525	217.736	216.921	202.394	179.734	145.566
.63116E+07	223.377	222.592	221.782	207.326	184.889	151.318
.94673E+07	226.232	225.452	224.647	210.266	188.036	154.928
.12623E+08	228.312	227.535	226.735	212.424	190.374	157.651
.15779E+08	229.946	229.174	228.377	214.129	192.240	159.847
.18935E+08	231.288	230.520	229.727	215.546	193.799	161.693
.22090E+08	232.412	231.647	230.858	216.736	195.127	163.283
.25246E+08	233.345	232.583	231.798	217.735	196.252	164.644
.28402E+08	234.163	233.404	232.622	218.618	197.253	165.867
.31558E+08	234.893	234.137	233.359	219.411	198.162	166.988
.63115E+08	239.608	238.879	238.127	224.660	204.345	174.817
.94673E+08	242.067	241.360	240.631	227.571	207.998	179.731
.12623E+09	243.806	243.118	242.410	229.708	210.765	183.556
.15779E+09	245.288	244.617	243.927	231.535	213.130	186.818
.18935E+09	246.165	245.512	244.839	232.764	214.890	189.441
.22090E+09	246.804	246.165	245.508	233.708	216.287	191.569
.25246E+09	247.370	246.745	246.102	234.558	217.558	193.510
.28402E+09	247.172	246.559	245.930	234.624	217.997	194.528
.31558E+09	247.069	246.468	245.849	234.743	218.429	195.446
.63115E+09	243.733	243.232	242.718	233.486	220.032	201.344
.94673E+09	240.468	240.044	239.609	231.800	220.477	204.905
.12623E+10	235.058	234.693	234.317	227.592	217.846	204.498
.15779E+10	229.338	229.020	228.694	222.856	214.391	202.821
.18935E+10	224.199	223.919	223.631	218.489	211.025	200.832
.22090E+10	219.448	219.198	218.942	214.365	207.711	198.624
.25246E+10	214.735	214.510	214.278	210.162	204.161	195.965
.28402E+10	210.892	210.687	210.475	206.721	201.236	193.745
.31558E+10	207.375	207.187	206.994	203.565	198.547	191.695
.63115E+10	190.218	190.108	189.995	187.998	185.050	181.010
.94673E+10	181.533	181.450	181.363	179.846	177.592	174.490
.12623E+11	176.721	176.652	176.581	175.335	173.478	170.917
.15779E+11	173.555	173.496	173.435	172.366	170.767	168.558
.18935E+11	170.449	170.398	170.344	169.412	168.015	166.079
.22090E+11	167.314	167.268	167.220	166.391	165.145	163.415
.25246E+11	164.122	164.081	164.039	163.298	162.179	160.623
.28402E+11	161.177	161.140	161.101	160.430	159.414	157.996
.31558E+11	158.567	158.533	158.498	157.884	156.952	155.648

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:13 JUN 17, 1995 CP= 55145.350
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
.10000E-05	35.9887	34.4842	29.8073	26.1379	161.002	161.002
.20000E-05	78.1292	76.8147	72.5859	69.2227	191.565	191.573
31.558	78.1291	76.8147	72.5859	69.2227	191.564	191.573
.31558E+07	107.831	106.650	102.772	99.5989	212.495	212.877
.63116E+07	114.472	113.320	109.531	106.379	217.310	217.700
.94673E+07	118.727	117.596	113.874	110.752	220.154	220.544
.12623E+08	121.985	120.873	117.205	114.109	222.231	222.621
.15779E+08	124.626	123.529	119.907	116.837	223.868	224.257
.18935E+08	126.876	125.793	122.217	119.164	225.219	225.607
.22090E+08	128.823	127.753	124.216	121.183	226.353	226.740

.25246E+08	130.508	129.448	125.947	122.933	227.296	227.685
.28402E+08	132.029	130.979	127.511	124.514	228.127	228.516
.31558E+08	133.436	132.396	128.960	125.979	228.871	229.259
.63115E+08	143.416	142.448	139.247	136.403	233.724	234.103
.94673E+08	149.919	149.003	145.975	143.239	236.319	236.688
.12623E+09	155.039	154.165	151.278	148.635	238.185	238.546
.15779E+09	159.385	158.546	155.776	153.211	239.778	240.132
.18935E+09	163.027	162.221	159.560	157.072	240.776	241.125
.22090E+09	166.007	165.228	162.659	160.236	241.522	241.865
.25246E+09	168.725	167.971	165.484	163.123	242.188	242.527
.28402E+09	170.396	169.663	167.245	164.938	242.092	242.423
.31558E+09	171.860	171.143	168.783	166.522	242.075	242.400
.63115E+09	182.459	181.889	180.011	178.168	239.561	239.836
.94673E+09	189.341	188.873	187.329	185.791	236.930	237.167
.12623E+10	191.242	190.845	189.532	188.219	232.020	232.226
.15779E+10	191.382	191.039	189.908	188.778	226.710	226.894
.18935E+10	190.786	190.486	189.493	188.504	221.894	222.060
.22090E+10	189.692	189.424	188.543	187.666	217.405	217.558
.25246E+10	187.918	187.678	186.884	186.098	212.907	213.047
.28402E+10	186.395	186.175	185.451	184.736	209.232	209.362
.31558E+10	184.974	184.773	184.111	183.459	205.865	205.987
.63115E+10	177.051	176.933	176.544	176.168	189.354	189.433
.94673E+10	171.446	171.355	171.056	170.771	180.885	180.948
.12623E+11	168.401	168.326	168.078	167.844	176.192	176.246
.15779E+11	166.387	166.322	166.108	165.908	173.104	173.152
.18935E+11	164.176	164.118	163.931	163.756	170.059	170.101
.22090E+11	161.710	161.659	161.491	161.335	166.969	167.007
.25246E+11	159.087	159.041	158.890	158.750	163.817	163.851
.28402E+11	156.595	156.553	156.415	156.289	160.902	160.933
.31558E+11	154.359	154.320	154.192	154.077	158.317	158.346

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55145.500 TIME= 05:16:13
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180

VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3824 TEMP	ts2i180	139.8	.1000E-05	240.0	.3156E+09
3	NSOL	1021 TEMP	t02i180	139.8	.1000E-05	240.0	.3156E+09
4	NSOL	1031 TEMP	s02i180	139.9	.1000E-05	240.0	.3156E+09
5	NSOL	1122 TEMP	h02i180	158.6	.3156E+11	251.2	.2525E+09
6	NSOL	1136 TEMP	c02i180	159.0	.3156E+11	257.1	.2525E+09
7	NSOL	1150 TEMP	h02o180	159.1	.3156E+11	259.1	.2525E+09
8	NSOL	1079 TEMP	s02o180	159.0	.3156E+11	257.2	.2525E+09
9	NSOL	1071 TEMP	t02o180	159.0	.3156E+11	257.2	.2525E+09
10	NSOL	1901 TEMP	s10i180	159.0	.3156E+11	257.2	.2525E+09
11	NSOL	1992 TEMP	h10i180	159.2	.3156E+11	260.4	.2525E+09
12	NSOL	2006 TEMP	c10i180	159.2	.3156E+11	260.0	.2525E+09
13	NSOL	2020 TEMP	h10o180	159.0	.3156E+11	256.3	.2525E+09
14	NSOL	1949 TEMP	s10o180	158.5	.3156E+11	249.0	.2525E+09
15	NSOL	1941 TEMP	t10o180	158.5	.3156E+11	248.9	.2525E+09
16	NSOL	2626 TEMP	s16i180	158.5	.3156E+11	248.9	.2525E+09
17	NSOL	2717 TEMP	h16i180	158.5	.3156E+11	247.3	.2525E+09
18	NSOL	2731 TEMP	c16i180	153.5	.1000E-05	242.0	.2525E+09
19	NSOL	2745 TEMP	h16o180	141.1	.1000E-05	233.7	.3156E+09
20	NSOL	2674 TEMP	s16o180	121.5	.1000E-05	223.1	.9467E+09
21	NSOL	2666 TEMP	t16o180	121.5	.1000E-05	223.1	.9467E+09
22	NSOL	3061 TEMP	s22i180	121.4	.1000E-05	223.1	.9467E+09
23	NSOL	3152 TEMP	h22i180	118.8	.1000E-05	221.0	.9467E+09
24	NSOL	3166 TEMP	c22i180	109.7	.1000E-05	216.6	.9467E+09
25	NSOL	3180 TEMP	h22o180	93.87	.1000E-05	209.9	.9467E+09
26	NSOL	3109 TEMP	s22o180	67.47	.1000E-05	199.7	.1262E+10
27	NSOL	3101 TEMP	t22o180	67.37	.1000E-05	199.7	.1262E+10
28	NSOL	4254 TEMP	i22i180	31.27	.1000E-05	190.3	.1578E+10
29	NSOL	4157 TEMP	i22o180	30.37	.1000E-05	189.9	.1578E+10
30	NSOL	4385 TEMP	o22o180	26.14	.1000E-05	188.3	.1578E+10

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:17 JUN 17, 1995 CP= 55149.240
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44. BUR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.430	177.441	177.543	194.906	203.915	206.958
31.558	177.431	177.442	177.544	194.906	203.915	206.958
.31558E+07	202.731	202.742	202.840	218.747	226.998	229.785
.63116E+07	208.446	208.457	208.554	224.160	232.270	235.009
.94673E+07	211.896	211.907	212.003	227.378	235.374	238.076
.12623E+08	214.442	214.453	214.549	229.734	237.637	240.307
.15779E+08	216.451	216.461	216.557	231.583	239.408	242.051
.18935E+08	218.112	218.123	218.218	233.105	240.861	243.481
.22090E+08	219.513	219.523	219.618	234.381	242.076	244.674
.25246E+08	220.681	220.691	220.785	235.437	243.076	245.655
.28402E+08	221.710	221.720	221.813	236.363	243.950	246.512
.31558E+08	222.639	222.649	222.742	237.193	244.731	247.275
.63115E+08	228.717	228.727	228.816	242.522	249.683	252.097
.94673E+08	232.066	232.076	232.161	245.309	252.186	254.500
.12623E+09	234.489	234.498	234.581	247.267	253.905	256.136
.15779E+09	236.530	236.540	236.620	248.914	255.349	257.510
.18935E+09	237.882	237.891	237.970	249.889	256.131	258.224
.22090E+09	238.904	238.913	238.989	250.593	256.670	258.707
.25246E+09	239.814	239.822	239.897	251.209	257.135	259.120
.28402E+09	239.854	239.863	239.936	251.000	256.798	258.739
.31558E+09	239.954	239.962	240.034	250.889	256.580	258.483
.63115E+09	238.143	238.150	238.209	247.195	251.920	253.490
.94673E+09	235.886	235.892	235.942	243.537	247.537	248.860
.12623E+10	231.032	231.037	231.080	237.667	241.139	242.283
.15779E+10	225.712	225.716	225.753	231.523	234.565	235.564
.18935E+10	220.883	220.887	220.919	226.046	228.752	229.638
.22090E+10	216.382	216.385	216.414	221.018	223.448	224.243
.25246E+10	211.862	211.865	211.891	216.072	218.280	219.000
.28402E+10	208.188	208.191	208.214	212.055	214.085	214.746
.31558E+10	204.834	204.836	204.858	208.389	210.255	210.863
.63115E+10	188.520	188.521	188.534	190.662	191.790	192.154
.94673E+10	180.147	180.148	180.157	181.804	182.676	182.958
.12623E+11	175.538	175.539	175.547	176.913	177.636	177.869
.15779E+11	172.515	172.515	172.522	173.703	174.329	174.530
.18935E+11	169.520	169.521	169.526	170.564	171.114	171.290
.22090E+11	166.466	166.467	166.472	167.402	167.894	168.051
.25246E+11	163.345	163.346	163.350	164.188	164.632	164.773
.28402E+11	160.456	160.456	160.461	161.225	161.630	161.759
.31558E+11	157.893	157.894	157.897	158.602	158.974	159.093

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:17 JUN 17, 1995 CP= 55149.250
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP s02o180	1071 TEMP t02o180	1901 TEMP s10i180	1992 TEMP h10i180	2006 TEMP c10i180	2020 TEMP h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	204.070	204.068	204.083	209.667	209.726	204.961
31.558	204.071	204.068	204.083	209.666	209.725	204.961
.31558E+07	227.160	227.158	227.171	232.010	231.816	227.203
.63116E+07	232.422	232.419	232.433	237.143	236.904	232.318
.94673E+07	235.526	235.523	235.537	240.146	239.877	235.321
.12623E+08	237.789	237.786	237.799	242.327	242.035	237.506
.15779E+08	239.561	239.558	239.571	244.030	243.722	239.217
.18935E+08	241.011	241.008	241.021	245.425	245.103	240.620

.22090E+08	242.225	242.222	242.234	246.587	246.254	241.791
.25246E+08	243.223	243.220	243.233	247.542	247.199	242.757
.28402E+08	244.096	244.093	244.105	248.375	248.025	243.601
.31558E+08	244.874	244.871	244.883	249.117	248.759	244.354
.63115E+08	249.810	249.807	249.819	253.782	253.384	249.137
.94673E+08	252.300	252.297	252.308	256.079	255.663	251.551
.12623E+09	254.008	254.005	254.016	257.633	257.206	253.210
.15779E+09	255.443	255.440	255.451	258.937	258.504	254.608
.18935E+09	256.215	256.212	256.222	259.592	259.157	255.361
.22090E+09	256.747	256.744	256.753	260.025	259.591	255.881
.25246E+09	257.204	257.201	257.210	260.393	259.960	256.330
.28402E+09	256.860	256.857	256.866	259.980	259.553	255.996
.31558E+09	256.635	256.632	256.641	259.697	259.275	255.780
.63115E+09	251.925	251.922	251.930	254.481	254.125	251.202
.94673E+09	247.514	247.512	247.519	249.693	249.392	246.907
.12623E+10	241.099	241.097	241.102	243.015	242.768	240.618
.15779E+10	234.515	234.513	234.518	236.218	236.017	234.143
.18935E+10	228.698	228.696	228.701	230.230	230.064	228.407
.22090E+10	223.393	223.391	223.395	224.785	224.647	223.166
.25246E+10	218.223	218.222	218.225	219.502	219.387	218.050
.28402E+10	214.028	214.027	214.030	215.214	215.116	213.893
.31558E+10	210.199	210.198	210.201	211.299	211.215	210.096
.63115E+10	191.744	191.743	191.745	192.435	192.403	191.741
.94673E+10	182.637	182.637	182.638	183.182	183.165	182.658
.12623E+11	177.602	177.602	177.603	178.058	178.048	177.630
.15779E+11	174.298	174.297	174.298	174.696	174.688	174.328
.18935E+11	171.084	171.084	171.085	171.436	171.432	171.117
.22090E+11	167.866	167.866	167.867	168.184	168.182	167.901
.25246E+11	164.606	164.606	164.606	164.894	164.894	164.642
.28402E+11	161.605	161.605	161.605	161.870	161.871	161.642
.31558E+11	158.951	158.950	158.951	159.196	159.198	158.988

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:17 JUN 17, 1995 CP= 55149.260
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1949 TEMP s10o180	1941 TEMP t10o180	2626 TEMP s16i180	2717 TEMP h16i180	2731 TEMP c16i180	2745 TEMP h16o180
.10000E-05	160.099	160.063	160.046	159.959	153.465	141.139
.20000E-05	194.457	194.420	194.401	193.483	186.914	175.198
.31558E+07	194.457	194.420	194.401	193.483	186.914	175.198
.63116E+07	217.355	217.318	217.297	215.914	209.371	198.105
.94673E+07	222.594	222.557	222.536	221.080	214.553	203.394
.12623E+08	225.706	225.668	225.648	224.139	217.637	206.577
.15779E+08	227.980	227.942	227.922	226.375	219.897	208.922
.18935E+08	229.769	229.732	229.711	228.133	221.681	210.780
.22090E+08	231.237	231.200	231.179	229.583	223.154	212.321
.25246E+08	232.471	232.434	232.413	230.798	224.394	213.623
.28402E+08	233.491	233.455	233.434	231.806	225.425	214.711
.31558E+08	234.388	234.351	234.331	232.693	226.334	215.675
.63115E+08	235.191	235.154	235.134	233.487	227.150	216.545
.94673E+08	240.374	240.338	240.318	238.629	232.492	222.317
.12623E+09	243.101	243.066	243.046	241.351	235.390	225.563
.15779E+09	245.026	244.992	244.973	243.283	237.478	227.950
.18935E+09	246.653	246.620	246.601	244.920	239.250	229.977
.22090E+09	247.629	247.596	247.578	245.916	240.387	231.368
.25246E+09	248.340	248.308	248.290	246.649	241.242	232.442
.28402E+09	248.965	248.934	248.916	247.295	242.003	233.405
.31558E+09	248.784	248.754	248.736	247.145	241.960	233.546
.63115E+09	248.697	248.667	248.650	247.082	241.989	233.728
.94673E+09	245.300	245.276	245.261	243.952	239.716	232.870
.12623E+10	241.900	241.879	241.867	240.763	237.179	231.397

.12623E+10	236.274	236.257	236.247	235.320	232.237	227.251
.15779E+10	230.344	230.329	230.320	229.541	226.869	222.532
.18935E+10	225.036	225.023	225.015	224.350	222.000	218.172
.22090E+10	220.144	220.132	220.125	219.552	217.463	214.048
.25246E+10	215.311	215.300	215.294	214.797	212.921	209.840
.28402E+10	211.380	211.370	211.365	210.925	209.215	206.399
.31558E+10	207.787	207.779	207.774	207.383	205.824	203.247
.63115E+10	190.357	190.352	190.349	190.155	189.250	187.733
.94673E+10	181.592	181.588	181.586	181.452	180.767	179.607
.12623E+11	176.747	176.744	176.742	176.638	176.077	175.121
.15779E+11	173.565	173.562	173.561	173.476	172.995	172.172
.18935E+11	170.447	170.445	170.444	170.374	169.954	169.235
.22090E+11	167.301	167.299	167.298	167.239	166.867	166.225
.25246E+11	164.102	164.100	164.100	164.050	163.717	163.142
.28402E+11	161.150	161.148	161.148	161.106	160.805	160.282
.31558E+11	158.535	158.534	158.533	158.497	158.222	157.742

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:17 JUN 17, 1995 CP= 55149.280
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	121.540	121.480	121.445	118.820	109.671	93.8703
.20000E-05	157.139	157.078	157.041	153.905	145.085	130.359
31.558	157.139	157.079	157.042	153.905	145.085	130.360
.31558E+07	181.122	181.061	181.023	177.567	169.034	155.077
.63116E+07	186.628	186.568	186.529	183.030	174.563	160.785
.94673E+07	189.998	189.938	189.899	186.376	177.973	164.343
.12623E+08	192.502	192.442	192.403	188.865	180.517	167.013
.15779E+08	194.499	194.439	194.400	190.852	182.555	169.160
.18935E+08	196.164	196.104	196.066	192.514	184.263	170.965
.22090E+08	197.581	197.522	197.483	193.929	185.722	172.514
.25246E+08	198.775	198.716	198.678	195.125	186.958	173.832
.28402E+08	199.839	199.779	199.741	196.191	188.065	175.017
.31558E+08	200.804	200.745	200.707	197.160	189.072	176.100
.63115E+08	207.325	207.267	207.231	203.746	195.984	183.613
.94673E+08	211.149	211.093	211.057	207.644	200.156	188.260
.12623E+09	214.022	213.968	213.933	210.589	203.338	191.846
.15779E+09	216.463	216.410	216.376	213.093	206.045	194.901
.18935E+09	218.256	218.205	218.172	214.958	208.111	197.308
.22090E+09	219.672	219.622	219.589	216.438	209.763	199.252
.25246E+09	220.951	220.902	220.870	217.778	211.262	201.021
.28402E+09	221.369	221.321	221.289	218.259	211.887	201.883
.31558E+09	221.783	221.736	221.705	218.726	212.474	202.669
.63115E+09	223.027	222.988	222.963	220.486	215.341	207.316
.94673E+09	223.114	223.081	223.060	220.969	216.646	209.929
.12623E+10	220.112	220.084	220.066	218.282	214.572	208.810
.15779E+10	216.320	216.296	216.280	214.751	211.540	206.546
.18935E+10	212.684	212.663	212.649	211.319	208.495	204.100
.22090E+10	209.146	209.127	209.115	207.944	205.434	201.520
.25246E+10	205.412	205.395	205.384	204.344	202.087	198.561
.28402E+10	202.346	202.331	202.321	201.382	199.323	196.104
.31558E+10	199.534	199.520	199.511	198.660	196.780	193.839
.63115E+10	185.537	185.529	185.524	185.051	183.958	182.235
.94673E+10	177.921	177.915	177.912	177.561	176.730	175.413
.12623E+11	173.729	173.724	173.721	173.438	172.755	171.670
.15779E+11	170.971	170.967	170.964	170.724	170.137	169.202
.18935E+11	168.183	168.179	168.177	167.970	167.457	166.640
.22090E+11	165.285	165.282	165.280	165.098	164.642	163.912
.25246E+11	162.297	162.294	162.292	162.131	161.723	161.068
.28402E+11	159.512	159.510	159.508	159.365	158.994	158.398

1 .31558E+11 157.035 157.033 157.032 156.902 156.562 156.015

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:17 JUN 17, 1995 CP= 55149.290
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4744	67.3672	31.2684	30.3726	26.1379
.20000E-05	106.010	105.897	74.2762	73.2890	69.1961
31.558	106.010	105.897	74.2762	73.2890	69.1961
.31558E+07	132.155	132.040	103.527	102.494	98.4328
.63116E+07	138.200	138.085	110.301	109.264	105.205
.94673E+07	142.029	141.914	114.661	113.624	109.588
.12623E+08	144.933	144.819	118.002	116.966	112.949
.15779E+08	147.284	147.170	120.714	119.680	115.686
.18935E+08	149.272	149.158	123.029	121.998	118.019
.22090E+08	150.989	150.875	125.033	124.005	120.045
.25246E+08	152.460	152.347	126.762	125.738	121.794
.28402E+08	153.788	153.674	128.328	127.307	123.380
.31558E+08	155.009	154.897	129.777	128.760	124.849
.63115E+08	163.602	163.492	140.076	139.090	135.323
.94673E+08	169.084	168.977	146.808	145.851	142.206
.12623E+09	173.369	173.264	152.108	151.177	147.638
.15779E+09	177.015	176.913	156.600	155.691	152.242
.18935E+09	179.995	179.896	160.370	159.484	156.127
.22090E+09	182.424	182.327	163.458	162.592	159.315
.25246E+09	184.638	184.543	166.271	165.424	162.221
.28402E+09	185.891	185.798	168.024	167.196	164.063
.31558E+09	187.005	186.914	169.555	168.742	165.668
.63115E+09	194.574	194.498	180.678	180.006	177.475
.94673E+09	199.316	199.253	187.901	187.335	185.209
.12623E+10	199.732	199.678	190.024	189.540	187.723
.15779E+10	198.697	198.650	190.325	189.909	188.342
.18935E+10	197.200	197.159	189.851	189.487	188.114
.22090E+10	195.385	195.348	188.848	188.527	187.311
.25246E+10	193.041	193.009	187.152	186.864	185.776
.28402E+10	191.069	191.039	185.687	185.427	184.437
.31558E+10	189.240	189.213	184.317	184.081	183.180
.63115E+10	179.545	179.530	176.643	176.509	175.992
.94673E+10	173.356	173.344	171.121	171.020	170.631
.12623E+11	169.974	169.965	168.126	168.043	167.724
.15779E+11	167.742	167.734	166.146	166.076	165.802
.18935E+11	165.362	165.355	163.962	163.901	163.662
.22090E+11	162.772	162.765	161.517	161.463	161.252
.25246E+11	160.043	160.037	158.913	158.864	158.675
.28402E+11	157.466	157.461	156.434	156.391	156.220
.31558E+11	155.159	155.155	154.209	154.169	154.013

 Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55149.430 TIME= 05:16:17
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6	IS AT NODE	57	ITEM= TEMP COMP=	NAME= c02i180
VARIABLE 7	IS AT NODE	71	ITEM= TEMP COMP=	NAME= h02o180
VARIABLE 8	IS AT NODE	22	ITEM= TEMP COMP=	NAME= s02o180
VARIABLE 9	IS AT NODE	120	ITEM= TEMP COMP=	NAME= t02o180
VARIABLE 10	IS AT NODE	161	ITEM= TEMP COMP=	NAME= s10i180
VARIABLE 11	IS AT NODE	252	ITEM= TEMP COMP=	NAME= h10i180
VARIABLE 12	IS AT NODE	266	ITEM= TEMP COMP=	NAME= c10i180
VARIABLE 13	IS AT NODE	280	ITEM= TEMP COMP=	NAME= h10o180
VARIABLE 14	IS AT NODE	209	ITEM= TEMP COMP=	NAME= s10o180
VARIABLE 15	IS AT NODE	201	ITEM= TEMP COMP=	NAME= t10o180
VARIABLE 16	IS AT NODE	306	ITEM= TEMP COMP=	NAME= s16i180
VARIABLE 17	IS AT NODE	397	ITEM= TEMP COMP=	NAME= h16i180
VARIABLE 18	IS AT NODE	411	ITEM= TEMP COMP=	NAME= c16i180
VARIABLE 19	IS AT NODE	425	ITEM= TEMP COMP=	NAME= h16o180
VARIABLE 20	IS AT NODE	354	ITEM= TEMP COMP=	NAME= s16o180
VARIABLE 21	IS AT NODE	346	ITEM= TEMP COMP=	NAME= t16o180
VARIABLE 22	IS AT NODE	451	ITEM= TEMP COMP=	NAME= s22i180
VARIABLE 23	IS AT NODE	542	ITEM= TEMP COMP=	NAME= h22i180
VARIABLE 24	IS AT NODE	556	ITEM= TEMP COMP=	NAME= c22i180
VARIABLE 25	IS AT NODE	570	ITEM= TEMP COMP=	NAME= h22o180
VARIABLE 26	IS AT NODE	499	ITEM= TEMP COMP=	NAME= s22o180
VARIABLE 27	IS AT NODE	491	ITEM= TEMP COMP=	NAME= t22o180
VARIABLE 28	IS AT NODE	3991	ITEM= TEMP COMP=	NAME= i22i180
VARIABLE 29	IS AT NODE	3981	ITEM= TEMP COMP=	NAME= i22o180
VARIABLE 30	IS AT NODE	4617	ITEM= TEMP COMP=	NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3802 TEMP	ts2i180	139.8	.1000E-05	239.7	.3156E+09
3	NSOL	87 TEMP	t02i180	139.8	.1000E-05	239.7	.3156E+09
4	NSOL	6 TEMP	s02i180	139.9	.1000E-05	239.8	.3156E+09
5	NSOL	43 TEMP	h02i180	158.6	.3156E+11	251.0	.2525E+09
6	NSOL	57 TEMP	c02i180	159.0	.3156E+11	256.9	.2525E+09
7	NSOL	71 TEMP	h02o180	159.1	.3156E+11	258.9	.2525E+09
8	NSOL	22 TEMP	s02o180	158.9	.3156E+11	257.0	.2525E+09
9	NSOL	120 TEMP	t02o180	158.9	.3156E+11	257.0	.2525E+09
10	NSOL	161 TEMP	s10i180	158.9	.3156E+11	257.0	.2525E+09
11	NSOL	252 TEMP	h10i180	159.2	.3156E+11	260.2	.2525E+09
12	NSOL	266 TEMP	c10i180	159.2	.3156E+11	259.7	.2525E+09
13	NSOL	280 TEMP	h10o180	159.0	.3156E+11	256.1	.2525E+09
14	NSOL	209 TEMP	s10o180	158.5	.3156E+11	248.7	.2525E+09
15	NSOL	201 TEMP	t10o180	158.5	.3156E+11	248.7	.2525E+09

16 NSOL	306 TEMP	s16i180	158.5	.3156E+11	248.7	.2525E+09
17 NSOL	397 TEMP	h16i180	158.5	.3156E+11	247.1	.2525E+09
18 NSOL	411 TEMP	c16i180	153.5	.1000E-05	241.8	.2525E+09
19 NSOL	425 TEMP	h16o180	141.1	.1000E-05	233.5	.3156E+09
20 NSOL	354 TEMP	s16o180	121.5	.1000E-05	222.9	.9467E+09
21 NSOL	346 TEMP	t16o180	121.5	.1000E-05	222.9	.9467E+09
22 NSOL	451 TEMP	s22i180	121.4	.1000E-05	222.9	.9467E+09
23 NSOL	542 TEMP	h22i180	118.8	.1000E-05	220.8	.9467E+09
24 NSOL	556 TEMP	c22i180	109.7	.1000E-05	216.5	.9467E+09
25 NSOL	570 TEMP	h22o180	93.87	.1000E-05	209.8	.9467E+09
26 NSOL	499 TEMP	s22o180	67.47	.1000E-05	199.6	.1262E+10
27 NSOL	491 TEMP	t22o180	67.37	.1000E-05	199.5	.1262E+10
28 NSOL	3991 TEMP	i22i180	31.27	.1000E-05	190.2	.1578E+10
29 NSOL	3981 TEMP	i22o180	30.37	.1000E-05	189.8	.1578E+10
30 NSOL	4617 TEMP	o22o180	26.14	.1000E-05	188.2	.1578E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:21 JUN 17, 1995 CP= 55153.160
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.421	177.432	177.534	194.897	203.907	206.950
31.558	177.421	177.432	177.534	194.897	203.907	206.950
.31558E+07	202.410	202.421	202.520	218.453	226.720	229.517
.63116E+07	208.122	208.133	208.231	223.862	231.987	234.735
.94673E+07	211.575	211.586	211.682	227.081	235.093	237.803
.12623E+08	214.123	214.134	214.229	229.439	237.357	240.036
.15779E+08	216.133	216.144	216.239	231.290	239.129	241.781
.18935E+08	217.797	217.807	217.902	232.813	240.583	243.212
.22090E+08	219.199	219.210	219.304	234.091	241.799	244.406
.25246E+08	220.367	220.377	220.471	235.147	242.799	245.387
.28402E+08	221.397	221.407	221.500	236.073	243.674	246.244
.31558E+08	222.326	222.337	222.429	236.903	244.454	247.008
.63115E+08	228.416	228.426	228.514	242.241	249.414	251.837
.94673E+08	231.776	231.785	231.871	245.038	251.926	254.248
.12623E+09	234.207	234.216	234.300	247.003	253.653	255.891
.15779E+09	236.256	236.265	236.346	248.656	255.102	257.270
.18935E+09	237.614	237.623	237.701	249.637	255.889	257.989
.22090E+09	238.641	238.650	238.727	250.346	256.433	258.476
.25246E+09	239.556	239.565	239.640	250.967	256.902	258.893
.28402E+09	239.604	239.613	239.686	250.764	256.571	258.517
.31558E+09	239.709	239.718	239.789	250.658	256.358	258.266
.63115E+09	237.940	237.947	238.006	247.002	251.733	253.307
.94673E+09	235.714	235.720	235.770	243.373	247.377	248.703
.12623E+10	230.884	230.889	230.932	237.525	241.000	242.146
.15779E+10	225.582	225.586	225.623	231.397	234.442	235.443
.18935E+10	220.766	220.770	220.802	225.933	228.641	229.529
.22090E+10	216.275	216.278	216.307	220.914	223.347	224.143
.25246E+10	211.765	211.768	211.794	215.977	218.187	218.908
.28402E+10	208.097	208.100	208.123	211.967	213.998	214.660
.31558E+10	204.748	204.751	204.772	208.307	210.174	210.782
.63115E+10	188.465	188.467	188.479	190.609	191.737	192.102
.94673E+10	180.103	180.104	180.114	181.761	182.634	182.916
.12623E+11	175.501	175.501	175.509	176.876	177.600	177.833
.15779E+11	172.482	172.482	172.489	173.671	174.297	174.498
.18935E+11	169.491	169.491	169.497	170.535	171.085	171.261
.22090E+11	166.440	166.441	166.446	167.376	167.868	168.026
.25246E+11	163.321	163.322	163.327	164.165	164.609	164.751
.28402E+11	160.434	160.435	160.439	161.204	161.609	161.738
.31558E+11	157.873	157.874	157.877	158.582	158.955	159.073

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:21 JUN 17, 1995 CP= 55153.170
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP s02o180	120 TEMP t02o180	161 TEMP s10i180	252 TEMP h10i180	266 TEMP c10i180	280 TEMP h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	204.062	204.060	204.075	209.659	209.718	204.954
31.558	204.063	204.060	204.075	209.659	209.718	204.954
.31558E+07	226.897	226.894	226.908	231.754	231.564	226.953
.63116E+07	232.154	232.151	232.165	236.882	236.648	232.063
.94673E+07	235.259	235.257	235.270	239.886	239.621	235.067
.12623E+08	237.522	237.520	237.533	242.067	241.780	237.252
.15779E+08	239.296	239.294	239.306	243.772	243.467	238.964
.18935E+08	240.747	240.744	240.757	245.168	244.849	240.368
.22090E+08	241.962	241.959	241.972	246.331	246.001	241.541
.25246E+08	242.960	242.957	242.970	247.286	246.946	242.506
.28402E+08	243.833	243.830	243.842	248.119	247.772	243.350
.31558E+08	244.611	244.608	244.621	248.861	248.506	244.103
.63115E+08	249.554	249.551	249.563	253.532	253.138	248.892
.94673E+08	252.052	252.049	252.060	255.836	255.424	251.312
.12623E+09	253.766	253.763	253.774	257.396	256.973	252.977
.15779E+09	255.207	255.204	255.214	258.706	258.275	254.380
.18935E+09	255.983	255.980	255.990	259.364	258.932	255.137
.22090E+09	256.519	256.516	256.525	259.802	259.370	255.661
.25246E+09	256.980	256.977	256.987	260.174	259.743	256.114
.28402E+09	256.641	256.638	256.648	259.766	259.341	255.785
.31558E+09	256.421	256.418	256.427	259.487	259.067	255.573
.63115E+09	251.744	251.741	251.749	254.303	253.948	251.026
.94673E+09	247.359	247.357	247.363	249.540	249.239	246.755
.12623E+10	240.963	240.961	240.967	242.881	242.635	240.485
.15779E+10	234.394	234.393	234.398	236.099	235.898	234.025
.18935E+10	228.589	228.588	228.592	230.123	229.957	228.300
.22090E+10	223.293	223.291	223.295	224.686	224.548	223.067
.25246E+10	218.131	218.130	218.134	219.411	219.297	217.960
.28402E+10	213.942	213.942	213.945	215.129	215.032	213.809
.31558E+10	210.119	210.118	210.121	211.219	211.136	210.016
.63115E+10	191.692	191.691	191.693	192.383	192.351	191.689
.94673E+10	182.595	182.595	182.596	183.140	183.123	182.617
.12623E+11	177.566	177.566	177.567	178.022	178.012	177.594
.15779E+11	174.266	174.266	174.267	174.664	174.656	174.296
.18935E+11	171.056	171.056	171.057	171.408	171.403	171.089
.22090E+11	167.841	167.841	167.841	168.159	168.156	167.875
.25246E+11	164.583	164.583	164.584	164.871	164.871	164.619
.28402E+11	161.584	161.584	161.585	161.849	161.850	161.621
.31558E+11	158.931	158.931	158.932	159.177	159.179	158.969

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:21 JUN 17, 1995 CP= 55153.180
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
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.10000E-05	160.099	160.063	160.046	159.959	153.465	141.139
.20000E-05	194.450	194.413	194.394	193.476	186.907	175.190
31.558	194.450	194.413	194.394	193.476	186.907	175.190
.31558E+07	217.104	217.067	217.046	215.663	209.117	197.842
.63116E+07	222.338	222.300	222.280	220.824	214.293	203.126
.94673E+07	225.451	225.413	225.393	223.884	217.378	206.310
.12623E+08	227.725	227.688	227.667	226.120	219.639	208.655
.15779E+08	229.515	229.478	229.458	227.879	221.423	210.514
.18935E+08	230.984	230.947	230.927	229.330	222.897	212.056
.22090E+08	232.219	232.183	232.162	230.547	224.138	213.359
.25246E+08	233.239	233.203	233.182	231.554	225.169	214.447
.28402E+08	234.136	234.099	234.079	232.441	226.078	215.411
.31558E+08	234.939	234.903	234.882	233.235	226.895	216.281
.63115E+08	240.128	240.092	240.072	238.382	232.241	222.059
.94673E+08	242.861	242.827	242.807	241.111	235.146	225.311
.12623E+09	244.792	244.758	244.739	243.049	237.240	227.704
.15779E+09	246.423	246.390	246.371	244.689	239.016	229.736
.18935E+09	247.403	247.371	247.352	245.690	240.157	231.131
.22090E+09	248.118	248.086	248.068	246.426	241.015	232.208
.25246E+09	248.747	248.716	248.698	247.076	241.780	233.176
.28402E+09	248.572	248.541	248.524	246.931	241.743	233.322
.31558E+09	248.488	248.459	248.442	246.873	241.775	233.508
.63115E+09	245.123	245.098	245.084	243.774	239.534	232.683
.94673E+09	241.746	241.726	241.714	240.608	237.022	231.235
.12623E+10	236.141	236.123	236.113	235.185	232.100	227.110
.15779E+10	230.225	230.210	230.201	229.421	226.747	222.406
.18935E+10	224.928	224.915	224.907	224.242	221.890	218.058
.22090E+10	220.044	220.032	220.026	219.452	217.361	213.943
.25246E+10	215.220	215.209	215.203	214.705	212.827	209.744
.28402E+10	211.294	211.285	211.280	210.839	209.128	206.310
.31558E+10	207.707	207.698	207.694	207.302	205.742	203.163
.63115E+10	190.305	190.300	190.297	190.102	189.197	187.679
.94673E+10	181.550	181.546	181.544	181.409	180.724	179.563
.12623E+11	176.711	176.708	176.706	176.602	176.040	175.083
.15779E+11	173.533	173.530	173.529	173.444	172.962	172.138
.18935E+11	170.419	170.417	170.416	170.345	169.925	169.205
.22090E+11	167.276	167.274	167.273	167.214	166.841	166.199
.25246E+11	164.079	164.078	164.077	164.027	163.694	163.118
.28402E+11	161.129	161.128	161.127	161.084	160.783	160.260
.31558E+11	158.516	158.515	158.514	158.477	158.202	157.722

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:21 JUN 17, 1995 CP= 55153.190
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	121.540	121.480	121.445	118.820	109.671	93.8704
.20000E-05	157.131	157.070	157.033	153.897	145.077	130.351
31.558	157.131	157.070	157.033	153.897	145.077	130.351
.31558E+07	180.845	180.784	180.746	177.291	168.758	154.798
.63116E+07	186.346	186.285	186.247	182.750	174.283	160.503
.94673E+07	189.716	189.656	189.617	186.097	177.694	164.063
.12623E+08	192.221	192.161	192.122	188.586	180.238	166.733
.15779E+08	194.219	194.159	194.120	190.574	182.277	168.882
.18935E+08	195.884	195.824	195.786	192.237	183.986	170.687
.22090E+08	197.303	197.243	197.205	193.653	185.446	172.238
.25246E+08	198.496	198.437	198.399	194.848	186.682	173.556
.28402E+08	199.560	199.500	199.462	195.914	187.788	174.741
.31558E+08	200.525	200.466	200.428	196.884	188.796	175.824
.63115E+08	207.052	206.995	206.958	203.475	195.714	183.344
.94673E+08	210.884	210.828	210.792	207.381	199.893	187.999

.12623E+09	213.763	213.709	213.674	210.332	203.082	191.592
.15779E+09	216.209	216.157	216.122	212.841	205.794	194.652
.18935E+09	218.007	217.956	217.923	214.711	207.865	197.064
.22090E+09	219.427	219.377	219.344	216.195	209.520	199.012
.25246E+09	220.711	220.662	220.629	217.539	211.024	200.786
.28402E+09	221.134	221.086	221.055	218.025	211.655	201.654
.31558E+09	221.553	221.506	221.475	218.497	212.247	202.445
.63115E+09	222.832	222.793	222.768	220.292	215.148	207.127
.94673E+09	222.946	222.913	222.891	220.801	216.481	209.767
.12623E+10	219.965	219.937	219.919	218.136	214.429	208.670
.15779E+10	216.190	216.166	216.150	214.621	211.412	206.423
.18935E+10	212.566	212.545	212.532	211.202	208.380	203.988
.22090E+10	209.037	209.019	209.007	207.836	205.328	201.418
.25246E+10	205.313	205.296	205.285	204.246	201.990	198.467
.28402E+10	202.254	202.239	202.229	201.290	199.232	196.017
.31558E+10	199.447	199.433	199.424	198.573	196.696	193.757
.63115E+10	185.481	185.473	185.468	184.995	183.904	182.183
.94673E+10	177.876	177.870	177.867	177.517	176.686	175.371
.12623E+11	173.690	173.685	173.682	173.400	172.717	171.634
.15779E+11	170.937	170.933	170.930	170.690	170.104	169.171
.18935E+11	168.153	168.149	168.147	167.940	167.428	166.612
.22090E+11	165.258	165.255	165.253	165.071	164.615	163.887
.25246E+11	162.272	162.269	162.268	162.107	161.699	161.045
.28402E+11	159.490	159.487	159.486	159.342	158.972	158.378
.31558E+11	157.015	157.012	157.011	156.881	156.542	155.996

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:21 JUN 17, 1995 CP= 55153.210
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP	491 TEMP	3991 TEMP	3981 TEMP	4617 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4744	67.3673	31.2684	30.3726	26.1379
.20000E-05	106.002	105.889	74.2666	73.2794	69.1884
31.558	106.002	105.889	74.2666	73.2794	69.1884
.31558E+07	131.870	131.755	103.209	102.177	98.1782
.63116E+07	137.912	137.797	109.982	108.945	104.950
.94673E+07	141.743	141.628	114.345	113.308	109.334
.12623E+08	144.649	144.534	117.688	116.652	112.698
.15779E+08	147.001	146.887	120.403	119.369	115.437
.18935E+08	148.991	148.877	122.720	121.689	117.771
.22090E+08	150.709	150.596	124.726	123.698	119.800
.25246E+08	152.180	152.067	126.456	125.431	121.549
.28402E+08	153.508	153.395	128.023	127.002	123.136
.31558E+08	154.730	154.617	129.473	128.455	124.606
.63115E+08	163.332	163.222	139.785	138.799	135.090
.94673E+08	168.823	168.716	146.529	145.572	141.983
.12623E+09	173.115	173.011	151.838	150.907	147.422
.15779E+09	176.768	176.666	156.339	155.430	152.033
.18935E+09	179.754	179.655	160.115	159.230	155.923
.22090E+09	182.188	182.091	163.209	162.344	159.116
.25246E+09	184.407	184.312	166.028	165.182	162.027
.28402E+09	185.666	185.573	167.789	166.961	163.874
.31558E+09	186.785	186.694	169.326	168.513	165.484
.63115E+09	194.390	194.315	180.490	179.819	177.325
.94673E+09	199.160	199.097	187.743	187.177	185.084
.12623E+10	199.598	199.544	189.889	189.405	187.615
.15779E+10	198.578	198.532	190.207	189.791	188.247
.18935E+10	197.094	197.053	189.745	189.381	188.030
.22090E+10	195.287	195.251	188.752	188.430	187.234
.25246E+10	192.953	192.920	187.064	186.777	185.706
.28402E+10	190.986	190.957	185.606	185.345	184.372
.31558E+10	189.162	189.136	184.241	184.005	183.119

.63115E+10	179.495	179.480	176.595	176.461	175.954
.94673E+10	173.316	173.305	171.083	170.982	170.600
.12623E+11	169.940	169.931	168.093	168.010	167.698
.15779E+11	167.712	167.704	166.117	166.047	165.779
.18935E+11	165.336	165.329	163.936	163.875	163.642
.22090E+11	162.748	162.741	161.494	161.440	161.233
.25246E+11	160.021	160.016	158.892	158.843	158.658
.28402E+11	157.446	157.441	156.415	156.372	156.205
.31558E+11	155.141	155.136	154.191	154.152	153.999

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 55153.350 TIME= 05:16:21
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135
 VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135
 VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135
 VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135
 VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135
 VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135
 VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135
 VARIABLE 10 IS AT NODE 1607 ITEM= TEMP COMP= NAME= s12i135
 VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135
 VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135
 VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135
 VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135
 VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135
 VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135
 VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135
 VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135
 VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135
 VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135
 VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135
 VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= i20o135
 VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135
 VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts2i135	140.1	.1000E-05	240.1	.3156E+09
3 NSOL	82 TEMP	t02i135	140.1	.1000E-05	240.1	.3156E+09
4 NSOL	1 TEMP	s02i135	140.1	.1000E-05	240.1	.3156E+09
5 NSOL	41 TEMP	h02i135	153.5	.1000E-05	247.6	.2525E+09
6 NSOL	57 TEMP	c02i135	159.0	.3156E+11	256.9	.2525E+09
7 NSOL	73 TEMP	h02o135	159.3	.3156E+11	262.3	.2525E+09
8 NSOL	10 TEMP	s02o135	159.4	.3156E+11	264.4	.2525E+09
9 NSOL	116 TEMP	t02o135	159.4	.3156E+11	264.6	.2525E+09
10 NSOL	1607 TEMP	s12i135	159.4	.3156E+11	264.7	.2525E+09
11 NSOL	1700 TEMP	h12i135	159.8	.3156E+11	269.2	.2525E+09
12 NSOL	1716 TEMP	c12i135	159.8	.3156E+11	268.3	.2525E+09
13 NSOL	1732 TEMP	h12o135	159.3	.3156E+11	260.2	.2525E+09
14 NSOL	1655 TEMP	s12o135	158.5	.3156E+11	246.5	.2525E+09
15 NSOL	1647 TEMP	t12o135	158.5	.3156E+11	245.9	.2525E+09
16 NSOL	2477 TEMP	s20i135	158.4	.3156E+11	245.2	.2525E+09
17 NSOL	2570 TEMP	h20i135	149.5	.1000E-05	233.8	.3156E+09
18 NSOL	2586 TEMP	c20i135	124.4	.1000E-05	219.7	.9467E+09
19 NSOL	2602 TEMP	i20o135	83.69	.1000E-05	204.1	.9467E+09
20 NSOL	2525 TEMP	s20o135	35.99	.1000E-05	190.7	.1578E+10
21 NSOL	2517 TEMP	t20o135	34.48	.1000E-05	190.3	.1578E+10
22 NSOL	3956 TEMP	i20o135	29.81	.1000E-05	189.2	.1578E+10
23 NSOL	4591 TEMP	o20o135	26.14	.1000E-05	188.1	.1578E+10
24 NSOL	2441 TEMP	c14i135	158.3	.3156E+11	241.6	.2525E+09
25 NSOL	1861 TEMP	c18i135	158.2	.3156E+11	241.4	.2525E+09
26 NSOL	499 TEMP	s22o180	67.47	.1000E-05	199.6	.1262E+10
27 NSOL	491 TEMP	t22o180	67.37	.1000E-05	199.5	.1262E+10
28 NSOL	3991 TEMP	i22i180	31.27	.1000E-05	190.2	.1578E+10
29 NSOL	3981 TEMP	i22o180	30.37	.1000E-05	189.8	.1578E+10
30 NSOL	4617 TEMP	o22o180	26.14	.1000E-05	188.2	.1578E+10

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 05:16:24 JUN 17, 1995 CP= 55156.440
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts2i135	82 TEMP t02i135	1 TEMP s02i135	41 TEMP h02i135	57 TEMP c02i135	73 TEMP h02o135
.10000E-05	140.119	140.119	140.125	153.480	169.379	178.567
.20000E-05	177.766	177.766	177.772	189.620	203.907	212.244
31.558	177.766	177.766	177.772	189.620	203.907	212.243
.31558E+07	202.884	202.875	202.877	213.675	226.720	234.328
.63116E+07	208.596	208.587	208.590	219.176	231.987	239.463
.94673E+07	212.046	212.037	212.040	222.466	235.093	242.465
.12623E+08	214.592	214.583	214.585	224.880	237.357	244.642
.15779E+08	216.600	216.591	216.593	226.777	239.129	246.340
.18935E+08	218.261	218.252	218.255	228.344	240.583	247.732
.22090E+08	219.661	219.652	219.654	229.658	241.799	248.888
.25246E+08	220.827	220.818	220.821	230.748	242.799	249.836
.28402E+08	221.856	221.847	221.849	231.705	243.674	250.662
.31558E+08	222.784	222.775	222.777	232.565	244.454	251.397
.63115E+08	228.857	228.849	228.851	238.128	249.414	255.995
.94673E+08	232.203	232.195	232.197	241.092	251.926	258.234
.12623E+09	234.622	234.614	234.616	243.196	253.653	259.734
.15779E+09	236.660	236.652	236.654	244.967	255.102	260.992
.18935E+09	238.008	238.000	238.002	246.061	255.889	261.596
.22090E+09	239.026	239.019	239.021	246.864	256.433	261.986
.25246E+09	239.933	239.925	239.927	247.572	256.902	262.313
.28402E+09	239.971	239.964	239.966	247.444	256.571	261.862
.31558E+09	240.069	240.062	240.064	247.401	256.358	261.548
.63115E+09	238.237	238.232	238.233	244.305	251.733	256.019
.94673E+09	235.964	235.960	235.961	241.092	247.377	250.994

.12623E+10	231.098	231.094	231.095	235.546	241.000	244.130
.15779E+10	225.767	225.764	225.765	229.663	234.442	237.178
.18935E+10	220.930	220.927	220.927	224.392	228.641	231.069
.22090E+10	216.421	216.418	216.419	219.530	223.347	225.525
.25246E+10	211.897	211.894	211.894	214.720	218.187	220.164
.28402E+10	208.218	208.215	208.216	210.812	213.998	215.813
.31558E+10	204.859	204.857	204.857	207.244	210.174	211.842
.63115E+10	188.531	188.530	188.530	189.968	191.737	192.740
.94673E+10	180.154	180.153	180.153	181.265	182.634	183.409
.12623E+11	175.543	175.542	175.542	176.465	177.600	178.242
.15779E+11	172.518	172.518	172.518	173.316	174.297	174.852
.18935E+11	169.523	169.522	169.522	170.223	171.085	171.571
.22090E+11	166.469	166.468	166.468	167.096	167.868	168.303
.25246E+11	163.347	163.346	163.346	163.913	164.609	165.000
.28402E+11	160.458	160.457	160.457	160.974	161.609	161.966
.31558E+11	157.895	157.894	157.894	158.370	158.955	159.283

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:24 JUN 17, 1995 CP= 55156.450
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.840	183.231	183.598	193.136	194.679	184.695
.20000E-05	215.936	216.268	216.578	224.561	225.134	215.147
31.558	215.936	216.268	216.579	224.560	225.133	215.147
.31558E+07	237.552	237.842	238.111	244.987	244.883	234.955
.63116E+07	242.594	242.877	243.139	249.829	249.612	239.685
.94673E+07	245.535	245.812	246.068	252.607	252.311	242.419
.12623E+08	247.662	247.935	248.187	254.605	254.249	244.392
.15779E+08	249.323	249.592	249.840	256.155	255.754	245.932
.18935E+08	250.674	250.939	251.184	257.416	256.976	247.190
.22090E+08	251.799	252.061	252.304	258.458	257.988	248.236
.25246E+08	252.716	252.976	253.216	259.304	258.807	249.089
.28402E+08	253.515	253.772	254.009	260.038	259.518	249.834
.31558E+08	254.222	254.478	254.713	260.685	260.144	250.493
.63115E+08	258.629	258.867	259.087	264.653	263.985	254.624
.94673E+08	260.730	260.957	261.165	266.448	265.714	256.604
.12623E+09	262.118	262.335	262.534	267.592	266.816	257.928
.15779E+09	263.282	263.491	263.682	268.551	267.743	259.050
.18935E+09	263.799	264.001	264.185	268.883	268.057	259.565
.22090E+09	264.116	264.311	264.490	269.046	268.210	259.891
.25246E+09	264.377	264.567	264.740	269.167	268.322	260.168
.28402E+09	263.873	264.058	264.227	268.555	267.716	259.716
.31558E+09	263.513	263.695	263.861	268.103	267.270	259.398
.63115E+09	257.599	257.748	257.884	261.405	260.669	254.030
.94673E+09	252.300	252.426	252.540	255.532	254.892	249.210
.12623E+10	245.251	245.360	245.460	248.090	247.556	242.624
.15779E+10	238.152	238.248	238.337	240.672	240.234	235.929
.18935E+10	231.932	232.018	232.096	234.198	233.835	230.025
.22090E+10	226.299	226.377	226.448	228.358	228.054	224.648
.25246E+10	220.867	220.938	221.003	222.758	222.505	219.430
.28402E+10	216.460	216.525	216.585	218.214	217.997	215.184
.31558E+10	212.436	212.496	212.552	214.062	213.877	211.300
.63115E+10	193.099	193.136	193.171	194.122	194.053	192.529
.94673E+10	183.688	183.717	183.744	184.496	184.460	183.296
.12623E+11	178.474	178.498	178.521	179.151	179.128	178.170
.15779E+11	175.051	175.073	175.092	175.641	175.626	174.801
.18935E+11	171.746	171.765	171.783	172.268	172.259	171.538
.22090E+11	168.460	168.477	168.493	168.931	168.927	168.285
.25246E+11	165.142	165.157	165.171	165.569	165.570	164.994
.28402E+11	162.095	162.109	162.122	162.488	162.491	161.969

1 .31558E+11 159.401 159.414 159.426 159.765 159.772 159.293

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:24 JUN 17, 1995 CP= 55156.460
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	166.036	165.210	164.357	149.513	124.435	83.6931
.20000E-05	197.147	196.334	195.496	180.672	156.881	119.928
31.558	197.147	196.334	195.496	180.671	156.881	119.928
.31558E+07	217.552	216.756	215.935	201.286	178.467	144.043
.63116E+07	222.385	221.593	220.777	206.200	183.601	149.780
.94673E+07	225.244	224.457	223.646	209.144	186.754	153.400
.12623E+08	227.326	226.543	225.736	211.305	189.095	156.130
.15779E+08	228.965	228.186	227.383	213.014	190.967	158.337
.18935E+08	230.309	229.535	228.736	214.435	192.531	160.193
.22090E+08	231.439	230.668	229.873	215.632	193.864	161.792
.25246E+08	232.369	231.601	230.809	216.628	194.987	163.153
.28402E+08	233.187	232.422	231.634	217.511	195.989	164.378
.31558E+08	233.918	233.156	232.372	218.305	196.900	165.502
.63115E+08	238.654	237.919	237.161	223.580	203.115	173.379
.94673E+08	241.138	240.424	239.690	226.520	206.804	178.341
.12623E+09	242.898	242.204	241.491	228.682	209.601	182.205
.15779E+09	244.397	243.720	243.024	230.528	211.991	185.500
.18935E+09	245.290	244.631	243.953	231.776	213.774	188.152
.22090E+09	245.942	245.298	244.636	232.735	215.190	190.305
.25246E+09	246.523	245.892	245.244	233.602	216.481	192.272
.28402E+09	246.345	245.728	245.093	233.691	216.947	193.323
.31558E+09	246.258	245.652	245.028	233.829	217.401	194.267
.63115E+09	243.043	242.538	242.019	232.709	219.164	200.361
.94673E+09	239.871	239.444	239.005	231.129	219.731	204.069
.12623E+10	234.538	234.169	233.791	227.007	217.198	203.777
.15779E+10	228.874	228.554	228.225	222.335	213.815	202.183
.18935E+10	223.779	223.497	223.207	218.019	210.506	200.259
.22090E+10	219.061	218.809	218.550	213.931	207.232	198.099
.25246E+10	214.381	214.154	213.920	209.765	203.724	195.486
.28402E+10	210.561	210.354	210.141	206.350	200.828	193.300
.31558E+10	207.063	206.874	206.679	203.216	198.164	191.277
.63115E+10	190.016	189.905	189.791	187.772	184.803	180.742
.94673E+10	181.370	181.286	181.199	179.664	177.393	174.276
.12623E+11	176.580	176.510	176.439	175.178	173.307	170.732
.15779E+11	173.431	173.371	173.309	172.227	170.616	168.395
.18935E+11	170.339	170.287	170.233	169.289	167.880	165.935
.22090E+11	167.215	167.168	167.120	166.281	165.024	163.285
.25246E+11	164.033	163.992	163.949	163.198	162.071	160.506
.28402E+11	161.096	161.058	161.019	160.339	159.314	157.889
.31558E+11	158.491	158.457	158.421	157.799	156.859	155.549

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:24 JUN 17, 1995 CP= 55156.470
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP s20o135	2517 TEMP t20o135	3956 TEMP i20o135	4591 TEMP o20o135	2441 TEMP c14i135	1861 TEMP c18i135
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.10000E-05	35.9887	34.4842	29.8073	26.1379	161.002	161.002
.20000E-05	78.0734	76.7586	72.5288	69.1651	191.544	191.536
.31558E+07	105.989	104.795	100.883	97.6902	211.785	211.613
.63116E+07	112.620	111.457	107.634	104.463	216.586	216.412
.94673E+07	116.891	115.750	111.994	108.854	219.432	219.259
.12623E+08	120.162	119.039	115.338	112.224	221.510	221.339
.15779E+08	122.819	121.711	118.056	114.968	223.150	222.979
.18935E+08	125.082	123.988	120.377	117.307	224.503	224.333
.22090E+08	127.043	125.962	122.390	119.341	225.641	225.472
.25246E+08	128.728	127.658	124.123	121.092	226.582	226.414
.28402E+08	130.255	129.195	125.693	122.679	227.413	227.245
.31558E+08	131.668	130.617	127.148	124.150	228.157	227.988
.63115E+08	141.721	140.744	137.513	134.653	233.025	232.859
.94673E+08	148.292	147.368	144.312	141.561	235.638	235.476
.12623E+09	153.469	152.587	149.673	147.017	237.519	237.361
.15779E+09	157.860	157.013	154.219	151.640	239.125	238.970
.18935E+09	161.542	160.729	158.045	155.544	240.133	239.982
.22090E+09	164.557	163.771	161.179	158.744	240.889	240.740
.25246E+09	167.309	166.549	164.041	161.667	241.566	241.421
.28402E+09	169.022	168.283	165.845	163.527	241.485	241.343
.31558E+09	170.519	169.797	167.417	165.145	241.480	241.341
.63115E+09	181.360	180.786	178.896	177.044	239.053	238.933
.94673E+09	188.417	187.947	186.393	184.848	236.490	236.386
.12623E+10	190.452	190.052	188.731	187.413	231.635	231.545
.15779E+10	190.687	190.343	189.205	188.070	226.366	226.286
.18935E+10	190.166	189.863	188.866	187.872	221.584	221.511
.22090E+10	189.124	188.856	187.969	187.088	217.118	217.051
.25246E+10	187.403	187.161	186.363	185.574	212.645	212.583
.28402E+10	185.917	185.695	184.967	184.249	208.987	208.929
.31558E+10	184.526	184.323	183.658	183.003	205.634	205.579
.63115E+10	176.767	176.648	176.257	175.879	189.204	189.169
.94673E+10	171.218	171.127	170.826	170.540	180.764	180.735
.12623E+11	168.206	168.130	167.881	167.646	176.088	176.063
.15779E+11	166.214	166.149	165.934	165.733	173.011	172.989
.18935E+11	164.022	163.965	163.776	163.600	169.976	169.956
.22090E+11	161.573	161.521	161.352	161.196	166.895	166.877
.25246E+11	158.964	158.918	158.765	158.625	163.750	163.734
.28402E+11	156.482	156.440	156.301	156.174	160.841	160.827
.31558E+11	154.254	154.215	154.087	153.970	158.261	158.247

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55156.620 TIME= 05:16:24
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 59 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 14 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 135 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1620 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 699 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 701 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 703 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 666 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 659 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 765 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 844 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 846 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 848 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 811 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 804 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 910 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 989 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 991 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 993 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 956 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 949 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4028 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3931 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4565 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts2i180	139.8	.1000E-05	239.8	.3156E+09
3	NSOL	104 TEMP	t02i180	139.8	.1000E-05	239.8	.3156E+09
4	NSOL	29 TEMP	s02i180	139.9	.1000E-05	239.9	.3156E+09
5	NSOL	55 TEMP	h02i180	158.6	.3156E+11	251.0	.2525E+09
6	NSOL	57 TEMP	c02i180	159.0	.3156E+11	256.9	.2525E+09
7	NSOL	59 TEMP	h02o180	159.1	.3156E+11	258.9	.2525E+09
8	NSOL	14 TEMP	s02o180	158.9	.3156E+11	256.9	.2525E+09
9	NSOL	135 TEMP	t02o180	158.9	.3156E+11	256.9	.2525E+09
10	NSOL	620 TEMP	s10i180	158.9	.3156E+11	256.9	.2525E+09
11	NSOL	699 TEMP	h10i180	159.2	.3156E+11	260.1	.2525E+09
12	NSOL	701 TEMP	c10i180	159.2	.3156E+11	259.6	.2525E+09
13	NSOL	703 TEMP	h10o180	159.0	.3156E+11	255.9	.2525E+09
14	NSOL	666 TEMP	s10o180	158.5	.3156E+11	248.5	.2525E+09
15	NSOL	659 TEMP	t10o180	158.5	.3156E+11	248.5	.2525E+09
16	NSOL	765 TEMP	s16i180	158.5	.3156E+11	248.5	.2525E+09
17	NSOL	844 TEMP	h16i180	158.5	.3156E+11	246.8	.2525E+09
18	NSOL	846 TEMP	c16i180	153.5	.1000E-05	241.5	.3156E+09
19	NSOL	848 TEMP	h16o180	141.1	.1000E-05	233.2	.3156E+09
20	NSOL	811 TEMP	s16o180	121.5	.1000E-05	222.7	.9467E+09
21	NSOL	804 TEMP	t16o180	121.5	.1000E-05	222.7	.9467E+09
22	NSOL	910 TEMP	s22i180	121.4	.1000E-05	222.6	.9467E+09
23	NSOL	989 TEMP	h22i180	118.8	.1000E-05	220.5	.9467E+09
24	NSOL	991 TEMP	c22i180	109.7	.1000E-05	216.2	.9467E+09
25	NSOL	993 TEMP	h22o180	93.87	.1000E-05	209.4	.9467E+09
26	NSOL	956 TEMP	s22o180	67.47	.1000E-05	199.3	.1262E+10
27	NSOL	949 TEMP	t22o180	67.37	.1000E-05	199.2	.1262E+10
28	NSOL	4028 TEMP	i22i180	31.27	.1000E-05	189.9	.1578E+10

29 NSOL 3931 TEMP i22o180 30.37 .1000E-05 189.5 .1578E+10
 30 NSOL 4565 TEMP o22o180 26.14 .1000E-05 187.9 .1578E+10

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:28 JUN 17, 1995 CP= 55160.360
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.425	177.436	177.538	194.899	203.907	206.948
31.558	177.426	177.436	177.539	194.899	203.907	206.948
.31558E+07	202.523	202.534	202.632	218.505	226.720	229.467
.63116E+07	208.235	208.246	208.343	223.914	231.987	234.686
.94673E+07	211.687	211.698	211.794	227.134	235.093	237.754
.12623E+08	214.234	214.245	214.340	229.490	237.357	239.987
.15779E+08	216.244	216.254	216.349	231.341	239.129	241.732
.18935E+08	217.906	217.917	218.011	232.864	240.583	243.164
.22090E+08	219.308	219.318	219.412	234.141	241.799	244.358
.25246E+08	220.475	220.486	220.579	235.197	242.799	245.339
.28402E+08	221.505	221.515	221.608	236.123	243.674	246.196
.31558E+08	222.434	222.445	222.537	236.954	244.454	246.960
.63115E+08	228.520	228.530	228.619	242.290	249.414	251.790
.94673E+08	231.877	231.887	231.972	245.086	251.926	254.202
.12623E+09	234.305	234.315	234.398	247.049	253.653	255.847
.15779E+09	236.352	236.361	236.441	248.701	255.102	257.227
.18935E+09	237.707	237.716	237.794	249.681	255.889	257.947
.22090E+09	238.733	238.742	238.818	250.389	256.433	258.435
.25246E+09	239.646	239.654	239.729	251.009	256.902	258.853
.28402E+09	239.691	239.699	239.772	250.805	256.571	258.478
.31558E+09	239.794	239.802	239.874	250.699	256.358	258.228
.63115E+09	238.011	238.018	238.077	247.036	251.733	253.275
.94673E+09	235.775	235.780	235.830	243.402	247.377	248.676
.12623E+10	230.936	230.941	230.984	237.550	241.000	242.123
.15779E+10	225.628	225.632	225.668	231.419	234.442	235.422
.18935E+10	220.807	220.811	220.843	225.953	228.641	229.510
.22090E+10	216.312	216.316	216.344	220.932	223.347	224.125
.25246E+10	211.799	211.802	211.828	215.994	218.187	218.893
.28402E+10	208.129	208.132	208.155	211.983	213.998	214.646
.31558E+10	204.779	204.781	204.802	208.321	210.174	210.768
.63115E+10	188.485	188.486	188.499	190.619	191.737	192.093
.94673E+10	180.119	180.120	180.129	181.769	182.634	182.909
.12623E+11	175.514	175.515	175.523	176.882	177.600	177.827
.15779E+11	172.494	172.494	172.501	173.677	174.297	174.493
.18935E+11	169.501	169.502	169.508	170.540	171.085	171.256
.22090E+11	166.450	166.450	166.455	167.381	167.868	168.022
.25246E+11	163.330	163.331	163.335	164.169	164.609	164.747
.28402E+11	160.442	160.443	160.447	161.208	161.609	161.734
.31558E+11	157.880	157.881	157.885	158.586	158.955	159.070

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:28 JUN 17, 1995 CP= 55160.370
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP	135 TEMP	620 TEMP	699 TEMP	701 TEMP	703 TEMP
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	s02o180	t02o180	s10i180	h10i180	c10i180	h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	204.058	204.056	204.071	209.653	209.710	204.944
31.558	204.058	204.056	204.071	209.653	209.710	204.944
.31558E+07	226.798	226.795	226.808	231.613	231.381	226.724
.63116E+07	232.054	232.051	232.064	236.740	236.463	231.832
.94673E+07	235.160	235.157	235.170	239.745	239.438	234.838
.12623E+08	237.424	237.421	237.434	241.927	241.598	237.025
.15779E+08	239.199	239.196	239.208	243.633	243.286	238.739
.18935E+08	240.650	240.646	240.659	245.030	244.669	240.144
.22090E+08	241.866	241.863	241.875	246.194	245.823	241.318
.25246E+08	242.864	242.860	242.873	247.149	246.768	242.283
.28402E+08	243.736	243.733	243.745	247.982	247.593	243.128
.31558E+08	244.515	244.512	244.524	248.724	248.328	243.881
.63115E+08	249.461	249.458	249.469	253.399	252.964	248.675
.94673E+08	251.961	251.958	251.968	255.707	255.255	251.101
.12623E+09	253.678	253.675	253.685	257.270	256.808	252.772
.15779E+09	255.121	255.117	255.128	258.583	258.115	254.180
.18935E+09	255.899	255.896	255.906	259.244	258.776	254.942
.22090E+09	256.436	256.433	256.443	259.684	259.216	255.469
.25246E+09	256.900	256.897	256.906	260.058	259.592	255.927
.28402E+09	256.563	256.560	256.569	259.654	259.195	255.603
.31558E+09	256.345	256.342	256.351	259.377	258.924	255.395
.63115E+09	251.679	251.677	251.684	254.210	253.827	250.874
.94673E+09	247.304	247.302	247.308	249.460	249.135	246.625
.12623E+10	240.916	240.914	240.919	242.812	242.544	240.373
.15779E+10	234.352	234.351	234.355	236.038	235.818	233.925
.18935E+10	228.551	228.550	228.554	230.067	229.884	228.210
.22090E+10	223.258	223.257	223.260	224.635	224.481	222.985
.25246E+10	218.100	218.099	218.102	219.365	219.236	217.884
.28402E+10	213.913	213.912	213.915	215.086	214.975	213.738
.31558E+10	210.091	210.090	210.093	211.179	211.082	209.950
.63115E+10	191.674	191.673	191.675	192.356	192.316	191.646
.94673E+10	182.581	182.581	182.582	183.119	183.095	182.582
.12623E+11	177.554	177.553	177.554	178.004	177.987	177.564
.15779E+11	174.255	174.254	174.255	174.647	174.635	174.270
.18935E+11	171.046	171.046	171.047	171.393	171.384	171.065
.22090E+11	167.832	167.832	167.833	168.146	168.139	167.854
.25246E+11	164.575	164.575	164.576	164.860	164.855	164.600
.28402E+11	161.577	161.577	161.577	161.839	161.836	161.604
.31558E+11	158.924	158.924	158.925	159.167	159.165	158.952

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:28 JUN 17, 1995 CP= 55160.380
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	160.099	160.063	160.046	159.959	153.465	141.139
.20000E-05	194.437	194.400	194.381	193.462	186.891	175.172
31.558	194.438	194.401	194.382	193.462	186.891	175.172
.31558E+07	216.822	216.785	216.764	215.345	208.755	197.430
.63116E+07	222.054	222.017	221.996	220.503	213.929	202.711
.94673E+07	225.170	225.132	225.111	223.566	217.018	205.900
.12623E+08	227.446	227.409	227.388	225.805	219.282	208.249
.15779E+08	229.239	229.201	229.181	227.566	221.069	210.111
.18935E+08	230.710	230.673	230.652	229.019	222.545	211.655
.22090E+08	231.947	231.910	231.889	230.238	223.789	212.963
.25246E+08	232.967	232.930	232.910	231.246	224.820	214.051
.28402E+08	233.864	233.827	233.806	232.133	225.729	215.015
.31558E+08	234.667	234.630	234.610	232.927	226.546	215.885

.63115E+08	239.863	239.827	239.807	238.082	231.902	221.674
.94673E+08	242.604	242.569	242.549	240.819	234.815	224.937
.12623E+09	244.542	244.508	244.488	242.765	236.919	227.340
.15779E+09	246.179	246.146	246.127	244.412	238.702	229.381
.18935E+09	247.166	247.133	247.114	245.420	239.851	230.786
.22090E+09	247.884	247.852	247.834	246.160	240.714	231.868
.25246E+09	248.519	248.488	248.470	246.817	241.486	232.844
.28402E+09	248.350	248.319	248.302	246.679	241.458	233.000
.31558E+09	248.272	248.242	248.224	246.626	241.497	233.193
.63115E+09	244.939	244.915	244.900	243.564	239.297	232.416
.94673E+09	241.590	241.569	241.557	240.429	236.819	231.007
.12623E+10	236.005	235.987	235.977	235.030	231.924	226.912
.15779E+10	230.105	230.089	230.081	229.283	226.590	222.231
.18935E+10	224.820	224.807	224.799	224.118	221.749	217.901
.22090E+10	219.945	219.933	219.926	219.337	217.231	213.797
.25246E+10	215.129	215.118	215.112	214.601	212.709	209.611
.28402E+10	211.210	211.200	211.195	210.741	209.017	206.186
.31558E+10	207.627	207.619	207.614	207.210	205.637	203.046
.63115E+10	190.253	190.248	190.246	190.042	189.129	187.603
.94673E+10	181.508	181.504	181.502	181.361	180.669	179.502
.12623E+11	176.675	176.672	176.670	176.560	175.993	175.030
.15779E+11	173.501	173.498	173.497	173.407	172.920	172.091
.18935E+11	170.390	170.388	170.387	170.312	169.887	169.163
.22090E+11	167.250	167.248	167.247	167.184	166.807	166.161
.25246E+11	164.056	164.054	164.053	164.000	163.663	163.084
.28402E+11	161.108	161.106	161.106	161.060	160.755	160.229
.31558E+11	158.496	158.495	158.494	158.455	158.176	157.693

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:28 JUN 17, 1995 CP= 55160.400
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	121.540	121.480	121.445	118.820	109.671	93.8703
.20000E-05	157.110	157.049	157.012	153.874	145.052	130.323
31.558	157.110	157.049	157.012	153.874	145.052	130.323
.31558E+07	180.371	180.310	180.271	176.781	168.199	154.173
.63116E+07	185.870	185.809	185.771	182.237	173.722	159.877
.94673E+07	189.245	189.184	189.146	185.589	177.138	163.443
.12623E+08	191.754	191.694	191.655	188.083	179.688	166.120
.15779E+08	193.756	193.696	193.657	190.075	181.732	168.275
.18935E+08	195.425	195.365	195.326	191.742	183.444	170.085
.22090E+08	196.848	196.788	196.749	193.163	184.910	171.642
.25246E+08	198.041	197.982	197.943	194.358	186.146	172.961
.28402E+08	199.105	199.045	199.007	195.424	187.252	174.144
.31558E+08	200.071	200.012	199.973	196.394	188.261	175.229
.63115E+08	206.612	206.555	206.518	203.000	195.194	182.767
.94673E+08	210.457	210.401	210.365	206.920	199.388	187.438
.12623E+09	213.349	213.295	213.260	209.885	202.592	191.048
.15779E+09	215.806	215.753	215.718	212.405	205.317	194.122
.18935E+09	217.615	217.563	217.530	214.287	207.401	196.549
.22090E+09	219.041	218.991	218.958	215.778	209.065	198.506
.25246E+09	220.335	220.286	220.253	217.133	210.581	200.293
.28402E+09	220.769	220.721	220.689	217.631	211.224	201.176
.31558E+09	221.197	221.149	221.118	218.112	211.827	201.979
.63115E+09	222.531	222.492	222.466	219.966	214.793	206.734
.94673E+09	222.689	222.657	222.635	220.524	216.178	209.434
.12623E+10	219.744	219.716	219.697	217.896	214.167	208.381
.15779E+10	215.993	215.969	215.954	214.409	211.180	206.167
.18935E+10	212.390	212.369	212.355	211.010	208.172	203.759
.22090E+10	208.875	208.856	208.844	207.660	205.136	201.206

.25246E+10	205.165	205.148	205.137	204.085	201.815	198.275
.28402E+10	202.116	202.101	202.091	201.139	199.069	195.837
.31558E+10	199.317	199.303	199.294	198.432	196.542	193.588
.63115E+10	185.397	185.389	185.384	184.904	183.804	182.074
.94673E+10	177.809	177.803	177.799	177.443	176.606	175.283
.12623E+11	173.632	173.627	173.624	173.336	172.648	171.557
.15779E+11	170.885	170.880	170.878	170.633	170.042	169.103
.18935E+11	168.106	168.102	168.100	167.889	167.372	166.551
.22090E+11	165.216	165.213	165.211	165.025	164.566	163.832
.25246E+11	162.234	162.232	162.230	162.066	161.654	160.996
.28402E+11	159.456	159.453	159.451	159.305	158.931	158.333
.31558E+11	156.983	156.980	156.979	156.846	156.504	155.955

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:28 JUN 17, 1995 CP= 55160.410
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4744	67.3672	31.2684	30.3726	26.1379
.20000E-05	105.969	105.855	74.2238	73.2364	69.1417
.31558E+07	105.969	105.856	74.2238	73.2364	69.1417
.63116E+07	131.151	131.035	102.300	101.264	97.2021
.94673E+07	137.192	137.077	109.076	108.035	103.977
.12623E+08	141.031	140.915	113.450	112.409	108.374
.15779E+08	143.944	143.829	116.805	115.765	111.750
.18935E+08	146.303	146.188	119.530	118.492	114.499
.22090E+08	148.298	148.184	121.856	120.820	116.843
.25246E+08	150.024	149.910	123.873	122.841	118.883
.28402E+08	151.496	151.382	125.605	124.576	120.635
.31558E+08	152.823	152.710	127.172	126.147	122.222
.63115E+08	154.047	153.934	128.625	127.604	123.695
.94673E+08	162.671	162.561	138.972	137.982	134.216
.12623E+09	168.183	168.075	145.745	144.784	141.140
.15779E+09	172.495	172.391	151.084	150.148	146.611
.18935E+09	176.165	176.063	155.608	154.695	151.247
.22090E+09	179.169	179.069	159.409	158.520	155.165
.25246E+09	181.613	181.515	162.518	161.648	158.373
.28402E+09	183.849	183.753	165.359	164.509	161.308
.31558E+09	185.125	185.032	167.142	166.310	163.179
.63115E+09	186.257	186.166	168.696	167.879	164.807
.94673E+09	193.947	193.871	179.968	179.294	176.763
.12623E+10	198.784	198.721	187.305	186.737	184.612
.15779E+10	199.274	199.220	189.514	189.028	187.211
.18935E+10	198.293	198.246	189.877	189.459	187.892
.22090E+10	196.838	196.797	189.451	189.085	187.713
.25246E+10	195.052	195.015	188.482	188.159	186.943
.28402E+10	192.739	192.706	186.819	186.530	185.441
.31558E+10	190.786	190.757	185.377	185.115	184.126
.63115E+10	188.975	188.948	184.026	183.788	182.887
.94673E+10	179.374	179.359	176.457	176.322	175.805
.12623E+11	173.218	173.207	170.971	170.870	170.480
.15779E+11	169.856	169.847	167.997	167.914	167.594
.18935E+11	167.637	167.629	166.031	165.960	165.686
.22090E+11	165.268	165.261	163.860	163.798	163.559
.25246E+11	162.687	162.681	161.425	161.371	161.159
.28402E+11	159.967	159.962	158.830	158.781	158.592
.31558E+11	157.397	157.392	156.359	156.315	156.144
	155.095	155.090	154.139	154.099	153.942

***** ROUTINE COMPLETED ***** CP= 55160.420

End of batch input file

PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44x.db
FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 29
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

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*-----*
|                                     |
|               ANSYS RUN COMPLETED               |
|-----|
|               REV. 5.0 A               |               HP 9000/7XX               |
| CP TIME      (sec) =    55164.500      | TIME = 05:16:32      |
| ELAPSED TIME (sec) =    56925.000      | DATE  = 06/17/95      |
|-----|
*-----*

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WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****

JOB NAME = ucf44b
 MEMORY REQUESTED (MB) = 64.0
 BATCH MODE REQUESTED
 start.ans FILE

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	16777216	64.000 MB	COMMAND LINE
MINIMUM WORK SPACE REQUIRED	=	4718592	18.000 MB	
MINIMUM WORK SPACE RECOMMENDED	=	6702496	25.568 MB	
WORK SPACE OBTAINED	=	16777214	64.000 MB	
BYTES PER WORD	=	4		

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 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
 ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
 ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

```

1 /COM, *****
2 /COM, ANSYS REVISION 5.0A 6/16/1995
3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
4 /COM, *****
5 /COM, *
6 /COM, * File name: ucf44b.inp *
7 /COM, * 44 BWR UCF with High T.L. Disposal Container *
8 /COM, * Helium Fill Gas *
9 /COM, *
10 /COM, * Material Property file: props01.dat *
11 /COM, *
12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes) *
13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
14 /COM, *
15 /COM, * SNF Heat Loads file: bwr1049.dat *
16 /COM, * SNF Type: 10 years old, 49000 MWd/MTU *
17 /COM, *
18 /COM, * Surface Temp. file: c21b5a.parm *
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19 /COM, *      83 MTU/acre (20.5 kgU/m^2) AML (High Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 22.5 m *
22 /COM, *      WP c/c spacing = 19.477 m *
23 /COM, *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,parm,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21b5a,parm,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 DCRAD=1.6260/2.0
68 OWALL=0.1000
69 IWALL=0.0200
70 DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 GCORL=320.0/1000.0
73 GCORS=181.6/1000.0
74 GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 HCELL=153.0/1000.0/2.0
79 SWALL=3.5/1000.0
80 TWALL=20.0/1000.0
81 THWLL=TWALL/2.0
82 /COM,
83 ACTVL=150.0*2.54/100.0
84 PEAKF=1.40
85 /COM, Define calculated parameters
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLL = assy_volume=cell_width^2*active_length

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89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.          (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.    (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLU=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,          ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,          MI45=MIRAD/SQRT(2.0)
123 /COM,          MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCRAD-OWALL)/SQRT(2.0)
126 DO45=DCRAD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,          *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01.dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049.dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLU),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTEMP
181 MPTEMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTEMP
188 MPTEMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTEMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Construct geometry for Disposal Container
204 /COM,
205 /COM, Define center and axis keypoints for waste package
206 /COM, Also, create placeholder keypoints and lines
207 /COM, (K's 1,2,3,4,5,6,7,8)
208 /COM, (L's 1,2,3,4)
209 K,1,0.0,0.0,0.0,
210 K,2,0.0,0.0,1.0,
211 K,3,0.0,0.0,1.3,
212 K,4,0.0,0.0,1.4,
213 K,5,0.0,0.0,1.5,
214 K,6,0.0,0.0,1.6,
215 K,7,0.0,0.0,1.7,
216 K,8,0.0,0.0,1.8,
217 L,3,4,
218 L,4,5,
219 L,5,6,
220 L,6,7,
221 /COM, Define disposal container outer radius and material interface
222 /COM, (K's 9,10,11,12,13,14)
223 /COM, (L's 5,6,7,8,9,10,11)
224 /COM, (A's 1,2)
225 K, 9, 0.0, (0.0-DCRAD),0.0,
226 K,10, DCRAD, 0.0,0.0,
227 K,11, 0.0, DCRAD,0.0,
228 K,12, 0.0, (OWALL-DCRAD),0.0,

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229 K,13, (DCRAD-OWALL), 0.0,0.0,
230 K,14, 0.0, (DCRAD-OWALL),0.0,
231 L,10,13,
232 LARC,10,9,1, DCRAD,
233 LARC,11,10,1, DCRAD,
234 LARC,13,12,1, (DCRAD-OWALL),
235 LARC,14,13,1, (DCRAD-OWALL),
236 L,11,14,
237 L,9,12,
238 AL,5,6,11,8,
239 AL,10,7,5,9,
240 /COM, *****
241 /COM, Define UCF shell inner edge and area
242 /COM, (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
243 /COM, ( 31,32,33,34,35)
244 /COM, (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
245 /COM, ( 28,29,30,31,32,33,34)
246 /COM, (A's 3,4)
247 K,15, 0.0, DCIRD,0.0,
248 K,16, GX22, GY22,0.0,
249 K,17, GX23, GY23,0.0,
250 K,18, GX24, GY24,0.0,
251 K,19, GX25, GY25,0.0,
252 K,20, DI45, DI45,0.0,
253 K,21, GY25, GX25,0.0,
254 K,22, GY24, GX24,0.0,
255 K,23, GY23, GX23,0.0,
256 K,24, GY22, GX22,0.0,
257 K,25,DCIRD, 0.0,0.0,
258 K,26, GY22, (0.0-GX22),0.0,
259 K,27, GY23, (0.0-GX23),0.0,
260 K,28, GY24, (0.0-GX24),0.0,
261 K,29, GY25, (0.0-GX25),0.0,
262 K,30, DI45, (0.0-DI45),0.0,
263 K,31, GX25, (0.0-GY25),0.0,
264 K,32, GX24, (0.0-GY24),0.0,
265 K,33, GX23, (0.0-GY23),0.0,
266 K,34, GX22, (0.0-GY22),0.0,
267 K,35, 0.0,(0.0-DCIRD),0.0,
268 L,14,15,
269 LARC,16,15,1,DCIRD,
270 LARC,17,16,1,DCIRD,
271 LARC,18,17,1,DCIRD,
272 LARC,19,18,1,DCIRD,
273 LARC,20,19,1,DCIRD,
274 LARC,21,20,1,DCIRD,
275 LARC,22,21,1,DCIRD,
276 LARC,23,22,1,DCIRD,
277 LARC,24,23,1,DCIRD,
278 LARC,25,24,1,DCIRD,
279 LARC,26,25,1,DCIRD,
280 LARC,27,26,1,DCIRD,
281 LARC,28,27,1,DCIRD,
282 LARC,29,28,1,DCIRD,
283 LARC,30,29,1,DCIRD,
284 LARC,31,30,1,DCIRD,
285 LARC,32,31,1,DCIRD,
286 LARC,33,32,1,DCIRD,
287 LARC,34,33,1,DCIRD,
288 LARC,35,34,1,DCIRD,
289 L,12,35,
290 L,25,13,
291 LSEL,S,LINE,,12,22,
292 LSEL,A,LINE,,9,
293 LSEL,A,LINE,,34,
294 AL,ALL,
295 LSEL,S,LINE,,23,33,
296 LSEL,A,LINE,,8,
297 LSEL,A,LINE,,34,
298 AL,ALL,

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299 LSEL,ALL,
300 /COM, *****
301 /COM, Define thermal shunts
302 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
303 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
304 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
305 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
306 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
307 /COM, ( 84,85,86,87,88,89,90,91,92)
308 /COM, (A's 5 - 26)
309 /COM,
310 /COM, horizontal thermal shunt
311 K,36, 0.0, (0.0-THWLL),0.0,
312 K,37, 0.0, THWLL,0.0,
313 K,38, THWLL, (0.0-THWLL),0.0,
314 K,39, THWLL, 0.0,0.0,
315 K,40, THWLL, THWLL,0.0,
316 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
317 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
318 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
319 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
320 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
321 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
322 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
323 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
324 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
325 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
326 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
327 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
328 /COM, vertical thermal shunt
329 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
330 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
331 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
332 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
333 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
334 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
335 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
336 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
337 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
338 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
339 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
340 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
341 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
342 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
343 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
344 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
345 /COM, Lines; shunt widths, horizontal then vertical: (35-57)
346 L,36, 1,
347 L, 1,37,
348 L,38,39,
349 L,39,40,
350 L,41,42,
351 L,42,43,
352 L,44,45,
353 L,45,46,
354 L,47,48,
355 L,48,49,
356 L,50,51,
357 L,51,52,
358 L,53,54,
359 L,55,56,
360 L,57,58,
361 L,59,60,
362 L,37,40,
363 L, 1,39,
364 L,36,38,
365 L,61,62,
366 L,63,64,
367 L,65,66,
368 L,67,68,

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369 /COM, Lines; shunt edges, horizontal then vertical: (58-92)

370 L,38,41,
371 L,39,42,
372 L,40,43,
373 L,41,44,
374 L,42,45,
375 L,43,46,
376 L,44,47,
377 L,45,48,
378 L,46,49,
379 L,47,50,
380 L,48,51,
381 L,49,52,
382 L,26,50,
383 L,25,51,
384 L,52,24,
385 L,15,53,
386 L,16,54,
387 L,53,55,
388 L,54,56,
389 L,55,57,
390 L,56,58,
391 L,57,59,
392 L,58,60,
393 L,59,37,
394 L,60,40,
395 L,36,61,
396 L,38,62,
397 L,61,63,
398 L,62,64,
399 L,63,65,
400 L,64,66,
401 L,65,67,
402 L,66,68,
403 L,67,35,
404 L,68,34,

define areas for thermal shunts

405 /COM,
406 AL,35,53,37,52,
407 AL,36,52,38,51,
408 AL,37,58,39,59,
409 AL,38,59,40,60,
410 AL,39,61,41,62,
411 AL,40,62,42,63,
412 AL,41,64,43,65,
413 AL,42,65,44,66,
414 AL,43,67,45,68,
415 AL,44,68,46,69,
416 AL,45,70,23,71,
417 AL,46,71,22,72,
418 AL,73,47,74,13,
419 AL,75,48,76,47,
420 AL,77,49,78,48,
421 AL,79,50,80,49,
422 AL,81,51,82,50,
423 AL,83,54,84,53,
424 AL,85,55,86,54,
425 AL,87,56,88,55,
426 AL,89,57,90,56,
427 AL,91,32,92,57,

428 /COM, *****

Define tube guides

429 /COM,
430 /COM, (K's 69 - 92)
431 /COM, (L's 93 - 136)
432 /COM, (A's 27 - 46)

433 /COM,
434 /COM, top guide

435 K,69, (THWLL+1.0*PITCH), (THWLL+4.0*PITCH),0.0,
436 K,70,(THWLL+1.0*PITCH+GWALL), (THWLL+4.0*PITCH),0.0,
437 K,71, (THWLL+1.0*PITCH), (THWLL+3.0*PITCH),0.0,
438 K,72,(THWLL+1.0*PITCH+GWALL), (THWLL+3.0*PITCH+GWALL),0.0,

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439 K,73, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH),0.0,
440 K,74, (THWLL+2.0*PITCH), (THWLL+3.0*PITCH+GWALL),0.0,
441 K,75, (THWLL+3.0*PITCH), (THWLL+2.0*PITCH),0.0,
442 K,76, (THWLL+3.0*PITCH+GWALL), (THWLL+2.0*PITCH),0.0,
443 K,77, (THWLL+3.0*PITCH), (THWLL+1.0*PITCH),0.0,
444 K,78, (THWLL+3.0*PITCH+GWALL), (THWLL+1.0*PITCH+GWALL),0.0,
445 K,79, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH),0.0,
446 K,80, (THWLL+4.0*PITCH), (THWLL+1.0*PITCH+GWALL),0.0,
447 /COM, bottom guide
448 K,81, (THWLL+4.0*PITCH), (-1.0*PITCH-THWLL),0.0,
449 K,82, (THWLL+4.0*PITCH), (-1.0*PITCH-GWALL-THWLL),0.0,
450 K,83, (THWLL+3.0*PITCH), (-1.0*PITCH-THWLL),0.0,
451 K,84, (THWLL+3.0*PITCH+GWALL), (-1.0*PITCH-GWALL-THWLL),0.0,
452 K,85, (THWLL+3.0*PITCH), (-2.0*PITCH-THWLL),0.0,
453 K,86, (THWLL+3.0*PITCH+GWALL), (-2.0*PITCH-THWLL),0.0,
454 K,87, (THWLL+2.0*PITCH), (-3.0*PITCH-THWLL),0.0,
455 K,88, (THWLL+2.0*PITCH), (-3.0*PITCH-GWALL-THWLL),0.0,
456 K,89, (THWLL+1.0*PITCH), (-3.0*PITCH-THWLL),0.0,
457 K,90, (THWLL+1.0*PITCH+GWALL), (-3.0*PITCH-GWALL-THWLL),0.0,
458 K,91, (THWLL+1.0*PITCH), (-4.0*PITCH-THWLL),0.0,
459 K,92, (THWLL+1.0*PITCH+GWALL), (-4.0*PITCH-THWLL),0.0,
460 /COM,
461 /COM, top guide
462 L,69,17,
463 L,18,70,
464 L,71,69,
465 L,70,72,
466 L,73,71,
467 L,72,74,
468 L,20,73,
469 L,74,19,
470 L,75,20,
471 L,21,76,
472 L,77,75,
473 L,76,78,
474 L,79,77,
475 L,78,80,
476 L,23,79,
477 L,80,22,
478 /COM, bottom guide
479 L,81,27,
480 L,28,82,
481 L,83,81,
482 L,82,84,
483 L,85,83,
484 L,84,86,
485 L,30,85,
486 L,86,29,
487 L,87,30,
488 L,31,88,
489 L,89,87,
490 L,88,90,
491 L,91,89,
492 L,90,92,
493 L,33,91,
494 L,92,32,
495 /COM, Guide thickness lines
496 L,69,70,
497 L,71,72,
498 L,73,74,
499 L,75,76,
500 L,77,78,
501 L,79,80,
502 L,82,81,
503 L,84,83,
504 L,86,85,
505 L,88,87,
506 L,90,89,
507 L,92,91,
508 /COM, Guide steel

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509 AL, 93,125, 94, 15,
510 AL, 95,126, 96,125,
511 AL, 97,127, 98,126,
512 AL, 99, 17,100,127,
513 AL,101,128,102, 18,
514 AL,103,129,104,128,
515 AL,105,130,106,129,
516 AL,107, 20,108,130,
517 AL,109,131,110, 25,
518 AL,111,132,112,131,
519 AL,113,133,114,132,
520 AL,115, 27,116,133,
521 AL,117,134,118, 28,
522 AL,119,135,120,134,
523 AL,121,136,122,135,
524 AL,123, 30,124,136,
525 /COM, Guide gaps
526 AL, 16, 94, 96, 98,100,
527 AL, 19,102,104,106,108,
528 AL, 26,110,112,114,116,
529 AL, 29,118,120,122,124,
530 /COM, *****
531 /COM, Define shell gaps at the exterior of the tube array
532 /COM, (L's 137 - 140)
533 /COM, (A's 47 - 50)
534 /COM,
535 L, 54, 69,
536 L, 79, 52,
537 L, 50, 81,
538 L, 91, 68,
539 /COM,
540 AL, 14, 74,137, 93,
541 AL, 21,107,138, 72,
542 AL, 24, 70,139,109,
543 AL, 31,123,140, 92,
544 /COM, *****
545 /COM, Define center full-tube
546 /COM, (K's 93 - 100)
547 /COM, (L's 141 - 152)
548 /COM, (A's 51 - 56)
549 K, 93, THWLL, THWLL,0.0,
550 K, 94, THWLL, (THWLL+PITCH),0.0,
551 K, 95, (THWLL+PITCH), (THWLL+PITCH),0.0,
552 K, 96, (THWLL+PITCH), THWLL,0.0,
553 K, 97, (THWLL+SWALL), (THWLL+SWALL),0.0,
554 K, 98, (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
555 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
556 K,100,(PITCH+THWLL-SWALL), (THWLL+SWALL),0.0,
557 L, 93, 97,
558 L, 94, 98,
559 L, 96,100,
560 L, 95, 99,
561 L, 96, 93,
562 L,100, 97,
563 L, 98, 99,
564 L, 94, 95,
565 L, 93, 94,
566 L, 97, 98,
567 L, 99,100,
568 L, 95, 96,
569 AL,149,141,150,142,
570 AL,145,143,146,141,
571 AL,152,144,151,143,
572 AL,148,142,147,144,
573 AL,150,146,151,147,
574 /COM, *****
575 /COM, Set element shapes and sizes for tubes
576 /COM, 8x8 mesh in fuel with 2
577 /COM, divisions per tube layer
578 ESHAPE,2,

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579 ESIZE,,1,
580 LSEL,S,LINE,,145,152,1,
581 LESIZE,ALL,,, 8,
582 LSEL,S,LINE,,141,144,1,
583 LESIZE,ALL,,, 2,
584 LSEL,ALL,
585 /COM,
586 /COM,          Mesh areas
587 /COM,          first fuel, then stainless tubes
588 MAT,14,
589 TYPE,1,
590 AMESH,55,
591 MAT, 1,
592 TYPE,1,
593 AMESH,51,54,1,
594 /COM,          *****
595 /COM,          Copy tube mesh
596 /COM,
597 /COM,          center full tube side, above, and below
598 /COM,          (A's 56 - 60 = Side 1)
599 AGEN,2,51,55,1,(1.0*PITCH),0.0,0.0,0,0,
600 /COM,          (A's 61 - 65 = Side 2)
601 AGEN,2,51,55,1,(2.0*PITCH),0.0,0.0,0,0,
602 /COM,          (A's 66 - 70 = Side 3)
603 AGEN,2,51,55,1,(3.0*PITCH),0.0,0.0,0,0,
604 /COM,
605 /COM,          (A's 71 - 75 = up 1)
606 AGEN,2,51,55,1,0.0,(1.0*PITCH),0.0,0,0,
607 /COM,          (A's 76 - 80 = up 2)
608 AGEN,2,51,55,1,0.0,(2.0*PITCH),0.0,0,0,
609 /COM,          (A's 81 - 85 = up 3)
610 AGEN,2,51,55,1,0.0,(3.0*PITCH),0.0,0,0,
611 /COM,
612 /COM,          (A's 86 - 90 = down 1)
613 AGEN,2,51,55,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
614 /COM,          (A's 91 - 95 = down 2)
615 AGEN,2,51,55,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
616 /COM,          (A's 96 - 100 = down 3)
617 AGEN,2,51,55,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
618 /COM,          (A's 101 - 105 = down 4)
619 AGEN,2,51,55,1,0.0,(-4.0*PITCH-TWALL),0.0,0,0,
620 /COM,
621 /COM,          (A's 106 - 110 = up 1)
622 AGEN,2,56,60,1,0.0,(1.0*PITCH),0.0,0,0,
623 /COM,          (A's 111 - 115 = up 2)
624 AGEN,2,56,60,1,0.0,(2.0*PITCH),0.0,0,0,
625 /COM,
626 /COM,          (A's 116 - 120 = down 1)
627 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
628 /COM,          (A's 121 - 125 = down 2)
629 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
630 /COM,          (A's 126 - 130 = down 3)
631 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
632 /COM,
633 /COM,          (A's 131 - 135 = up 1)
634 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
635 /COM,          (A's 136 - 140 = up 2)
636 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
637 /COM,
638 /COM,          (A's 141 - 145 = down 1)
639 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
640 /COM,          (A's 146 - 150 = down 2)
641 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
642 /COM,          (A's 151 - 155 = down 3)
643 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
644 /COM,
645 /COM,          (A's 156 - 160 = down 1)
646 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
647 /COM,
648 /COM,          *****

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649 /COM,          Create mesh in tube guides, thermal shunts
650 /COM,          Set mesh size for gaps.....
651 ESIZE,,2,
652 LSEL,S,LINE,, 35, 57,1,
653 LSEL,A,LINE,,125,136,1,
654 LSEL,A,LINE,, 13, 15,2,
655 LSEL,A,LINE,, 17, 18,1,
656 LSEL,A,LINE,, 20, 22,2,
657 LSEL,A,LINE,, 23, 25,2,
658 LSEL,A,LINE,, 27, 28,1,
659 LSEL,A,LINE,, 30, 32,2,
660 LESIZE,ALL,,, 2,
661 LSEL,S,LINE,, 70, 74,1,
662 LSEL,A,LINE,, 91, 94,1,
663 LSEL,A,LINE,,107,110,1,
664 LSEL,A,LINE,,123,124,1,
665 LESIZE,ALL,,, 3,
666 LSEL,S,LINE,, 14, 21,7,
667 LSEL,A,LINE,, 24, 31,7,
668 LSEL,A,LINE,, 58, 69,1,
669 LSEL,A,LINE,, 75, 90,1,
670 LSEL,A,LINE,, 95,106,1,
671 LSEL,A,LINE,,111,122,1,
672 LSEL,A,LINE,,137,140,1,
673 LESIZE,ALL,,, 8,
674 LSEL,S,LINE,, 16, 19,3,
675 LSEL,A,LINE,, 26, 29,3,
676 LESIZE,ALL,,, 16,
677 /COM,          MESH CORNER GUIDES
678 ESHAPE,2,
679 ESIZE,,1,
680 MAT,2,
681 TYPE,1,
682 AMESH,27,42,1,
683 /COM,          MESH THERMAL SHUNTS
684 ESHAPE,2,
685 ESIZE,,1,
686 MAT,13,
687 TYPE,1,
688 AMESH, 5,26,1,
689 NUMMRG,NODE,
690 NUMMRG,KP,
691 /COM,          *****
692 /COM,          Create mesh in UCF inner shell
693 /COM,          (L's 105,108 ????)
694 LSEL,S,LINE,,13,22,1,
695 LCCAT,ALL,
696 LSEL,S,LINE,,23,32,1,
697 LCCAT,ALL,
698 LSEL,ALL,
699 LESIZE,8,,,60,
700 LESIZE,9,,,60,
701 LESIZE,12,,, 3,
702 LESIZE,33,,, 3,
703 MAT,2,
704 TYPE,1,
705 AMESH,3,4,1
706 /COM,          Delete concatenated lines
707 /COM,          (L's freed up 105,108 ????)
708 /COM,          LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES
709 /COM,
710 LSEL,S,LINE,,6,7,1,
711 LESIZE,ALL,,,60,
712 LSEL,ALL,
713 LESIZE, 5,,, 3,
714 LESIZE,10,,, 3,
715 LESIZE,11,,, 3,
716 MAT,3,
717 TYPE,1,
718 AMESH,1,2,1,

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719 NUMMRG,NODE,
720 NUMMRG,KP,
721 /COM, *****
722 /COM, Create mesh in empty basket spaces
723 ESIZE,0.1,
724 ESHAPE,0,
725 MAT,7,
726 TYPE,1,
727 AMESH,43,50,1,
728 NUMMRG,NODE,
729 NUMMRG,KP,
730 /COM, *****
731 /COM, Create radiation surface elements
732 /COM, Basket spaces
733 MAT,2,
734 TYPE,17,
735 LMESH, 14, 16,2,
736 LMESH, 19, 21,2,
737 LMESH, 24, 26,2,
738 LMESH, 29, 31,2,
739 LMESH, 93, 94,1,
740 LMESH, 96,124,2,
741 LMESH,107,109,2,
742 LMESH,123,
743 MAT,1,
744 TYPE,17,
745 LMESH,137,140,1,
746 MAT,13,
747 TYPE,17,
748 LMESH,70,72,2,
749 LMESH,74,
750 LMESH,92,
751 /COM,
752 FINISH
753 /COM, *****
754 /COM, Create element mesh plots to illustrate model
755 /COM, View mesh for entire model
756 /RESET
757 /TRIAD,OFF,
758 /NUM, 1,
759 /PNUM,MAT, 1,
760 /TYPE,HIDP,
761 /GLINE,,0,
762 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
763 /TITLE, 44 BWR UCF/Waste Package - 1/2 FEM Model
764 /SHOW,meshfull,grph,1,8,
765 EPLOT
766 ESEL,U,MAT,, 7,
767 /SHOW,meshgap,grph,1,8,
768 EPLOT
769 /COM, View mesh for radiation substructure
770 /PNUM,MAT, 0,
771 /PNUM,TYPE, 1,
772 ESEL,S,TYPE,,17,
773 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
774 /SHOW,meshrad,grph,1,8,
775 EPLOT
776 ESEL,ALL,
777 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
778 /COM, *****
779 /COM, Generate super-elements
780 /AUX12,
781 ESEL,S,TYPE,,17,
782 NSLE,S,
783 STEF,5.67E-8,
784 GEOM,1,0,
785 VTYPE,0,800,
786 WRITE,spaces,
787 ESEL,ALL,
788 NSEL,ALL,

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789 FINISH
790 /PREP7,
791 TYPE,18,
792 SE,spaces,
793 /COM, Delete radiation edge elements
794 LSEL,S,TYPE,,17,
795 LCLEAR,ALL,
796 LSEL,ALL,
797 FINISH
798 /COM, *****
799 /COM, Set solution parameters and apply B.C.'s
800 /COM,
801 /COM, Solve steady-state for initial conditions
802 /COM, with WP surface equal to drift ambient
803 /COM, temperature from repository model.
804 /SOLU
805 ANTYPE,TRAN,NEW,
806 NROPT,AUTO,
807 TRNOPT,FULL,
808 TOFFST,273.15,
809 LSEL,S,LINE,,6,
810 LSEL,A,LINE,,7,
811 NSLL,S,1,
812 D,ALL,TEMP,DFAMBT,
813 LSEL,ALL,
814 NSEL,ALL,
815 ASEL,S,MAT,,14,
816 ESLA,S,
817 BFE,ALL,HGEN,,(FUEL(TM_START)),
818 ASEL,ALL,
819 ESEL,ALL,
820 TIMINT,OFF,
821 TIME,1e-6,
822 AUTOTS,ON,
823 KBC,0,
824 SOLVE
825 /COM, Solve steady-state for initial conditions
826 /COM, with WP surface temperatures from repository
827 /COM, steady-state solution.
828 LSEL,S,LINE,,6,
829 LSEL,A,LINE,,7,
830 NSLL,S,1,
831 DDELE,ALL,TEMP,
832 LSEL,ALL,
833 NSEL,ALL,
834 DK,11,TEMP,(WPTOP(TM_START)),,1,
835 DK,10,TEMP,(WPSID(TM_START)),,1,
836 DK,9,TEMP,(WPBOT(TM_START)),,1,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,2e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM, *****
848 /COM, Set time integration parameters
849 TIMINT,ON,
850 AUTOTS,ON,
851 /COM, Time substep ranges from 10 sec to 1/4 loadstep
852 NSUBST,10,40,5,ON
853 /COM, Begin Transient
854 /COM, Apply loads and solve for 0 to .9 years
855 *DO,TM,TM_START,TME0,TM10
856 TIME,TM,
857 ASEL,S,MAT,,14,
858 ESLA,S,

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859      BFE,ALL,HGEN,,(FUEL(TM)),
860      ASEL,ALL
861      ESEL,ALL
862      DK,11,TEMP,(WPTOP(TM)),,1,
863      DK,10,TEMP,(WPSID(TM)),,1,
864      DK, 9,TEMP,(WPBOT(TM)),,1,
865      SOLVE
866 *ENDDO
867 /COM,          Apply loads and solve for 1 to 9 years
868 *DO,TM,TME1,TME9,TM11
869      TIME,TM,
870      ASEL,S,MAT,,14,
871      ESLA,S,
872      BFE,ALL,HGEN,,(FUEL(TM)),
873      ASEL,ALL
874      ESEL,ALL
875      DK,11,TEMP,(WPTOP(TM)),,1,
876      DK,10,TEMP,(WPSID(TM)),,1,
877      DK, 9,TEMP,(WPBOT(TM)),,1,
878      SOLVE
879 *ENDDO
880 /COM,          Apply loads and solve for 10 to 90 years
881 *DO,TM,TME10,TME90,TM110
882      TIME,TM,
883      ASEL,S,MAT,,14,
884      ESLA,S,
885      BFE,ALL,HGEN,,(FUEL(TM)),
886      ASEL,ALL
887      ESEL,ALL
888      DK,11,TEMP,(WPTOP(TM)),,1,
889      DK,10,TEMP,(WPSID(TM)),,1,
890      DK, 9,TEMP,(WPBOT(TM)),,1,
891      SOLVE
892 *ENDDO
893 /COM,          Apply loads and solve for 100 to 1000 years
894 *DO,TM,TME100,TME1000,TM1100
895      TIME,TM,
896      ASEL,S,MAT,,14,
897      ESLA,S,
898      BFE,ALL,HGEN,,(FUEL(TM)),
899      ASEL,ALL
900      ESEL,ALL
901      DK,11,TEMP,(WPTOP(TM)),,1,
902      DK,10,TEMP,(WPSID(TM)),,1,
903      DK, 9,TEMP,(WPBOT(TM)),,1,
904      SOLVE
905 *ENDDO
906 FINISH
907 SAVE,
908 /COM,          *****
909 /COM,          Create element contour plots of solution results
910 /COM,
911 /COM,          Sort through solution results for time of max temp.
912 /POST26,
913 NSOL,2,(NODE((THWLL+SCCELL),(-1.0*THWLL-SCCELL),0.0)),TEMP,,peakclad,
914 STORE,NEW,
915 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
916 FINISH
917 /POST1,
918 /COM,          Create temperature contour plots of WP at peak
919 /RESET
920 /TRIAD,OFF,
921 /NUM, 1,
922 /PNUM,MAT, 1,
923 /TYPE,HIDP,
924 /GLINE,-1,
925 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
926 ESEL,U,MAT,,7,
927 SET,NEAR,,,TMTMAX,
928 /TITLE, 44 BWR UCF/WP at Time of Peak Temp. (XTMTMAX/3.15576E7% years)

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929 /SHOW,solupk,grph,0,8,
930 /CONTOUR,1,128,AUTO,
931 PLNSOL,TEMP,
932 /COM,          Create temperature contour plots at 10, 50, and 100 yrs
933 SET,NEAR,,,,TME10,
934 /TITLE, 44 BWR UCF/WP at 10 years
935 /SHOW,solu10,grph,0,8,
936 /CONTOUR,1,128,USER,
937 PLNSOL,TEMP,
938 SET,NEAR,,,,TME50,
939 /TITLE, 44 BWR UCF/WP at 50 years
940 /SHOW,solu50,grph,0,8,
941 /CONTOUR,1,128,USER,
942 PLNSOL,TEMP,
943 SET,NEAR,,,,TME100,
944 /TITLE, 44 BWR UCF/WP at 100 years
945 /SHOW,solu100,grph,0,8,
946 /CONTOUR,1,128,USER,
947 PLNSOL,TEMP,
948 ESEL,ALL,
949 FINISH
950 /COM,          *****
951 /COM,          Set some needed variable values:
952 /COM,
953 DATM=THWLL+SCELL
954 DAT1=DATM+PITCH
955 DAT2=DATM+(2.0*PITCH)
956 DAT3=DATM+(3.0*PITCH)
957 /COM,
958 /COM,          *****
959 /COM,          Print time/temperature output at specific locations
960 /COM,          Save profile from center to edge
961 /COM,
962 /COM,          Variable Legend: A01i000
963 /COM,          c = center of assembly
964 /COM,          h = halfway between center and tube
965 /COM,          s = inside structural stainless tube layer
966 /COM,          t = stainless tube cladding
967 /COM,          g = tube guide
968 /COM,          i = inner barrier of DC
969 /COM,          o = outer barrier of DC
970 /COM,          ## = ID number of assembly (01 is center)
971 /COM,          i = side of assembly toward center of WP
972 /COM,          o = side of assembly toward edge of WP
973 /COM,          000 = profile center down
974 /COM,          045 = profile 45 deg down
975 /COM,          090 = profile center side
976 /COM,          135 = profile 45 deg up
977 /COM,          180 = profile center up
978 /POST26,
979 NUMVAR,30,
980 /COM,
981 /COM,          *****
982 /COM,          *Temperature Profile from center offset to bottom of WP (0 deg.)*
983 /COM,          *****
984 NSOL, 2,(NODE(      DATM,          0.0,0.0)),TEMP,,ts1i000,
985 NSOL, 3,(NODE(      DATM,          (0.0-THWLL),0.0)),TEMP,,t01i000,
986 NSOL, 4,(NODE(      DATM,          (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
987 NSOL, 5,(NODE(      DATM,          (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
988 NSOL, 6,(NODE(      DATM,          (0.0-DATM),0.0)),TEMP,,c01i000,
989 NSOL, 7,(NODE(      DATM,          (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
990 NSOL, 8,(NODE(      DATM,          (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
991 NSOL, 9,(NODE(      DATM,          (0.0-DATM-SCELL),0.0)),TEMP,,t01o000,
992 NSOL,10,(NODE(      DATM,          (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
993 NSOL,11,(NODE(      DATM,          (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
994 NSOL,12,(NODE(      DATM,          (0.0-DAT1),0.0)),TEMP,,c09i000,
995 NSOL,13,(NODE(      DATM,          (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
996 NSOL,14,(NODE(      DATM,          (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
997 NSOL,15,(NODE(      DATM,          (0.0-DAT1-SCELL),0.0)),TEMP,,t09o000,
998 NSOL,16,(NODE(      DATM,          (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,

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999 NSOL,17,(NODE(      DATM,      (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1000 NSOL,18,(NODE(      DATM,      (0.0-DAT2),0.0)),TEMP,,c15i000,
1001 NSOL,19,(NODE(      DATM,      (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1002 NSOL,20,(NODE(      DATM,      (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1003 NSOL,21,(NODE(      DATM,      (0.0-DAT2-SCCELL),0.0)),TEMP,,t15o000,
1004 NSOL,22,(NODE(      DATM,      (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1005 NSOL,23,(NODE(      DATM,      (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1006 NSOL,24,(NODE(      DATM,      (0.0-DAT3),0.0)),TEMP,,c21i000,
1007 NSOL,25,(NODE(      DATM,      (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1008 NSOL,26,(NODE(      DATM,      (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1009 NSOL,27,(NODE(      DATM,      (0.0-DAT3-SCCELL),0.0)),TEMP,,t21o000,
1010 NSOL,28,(NODE(      DATM,      (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1011 NSOL,29,(NODE(      DATM,      (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1012 NSOL,30,(NODE(      DATM,      (0.0-DCRAD),0.0)),TEMP,,o21o000,
1013 PRVAR, 2, 3, 4, 5, 6, 7,
1014 PRVAR, 8, 9,10,11,12,13,
1015 PRVAR,14,15,16,17,18,19,
1016 PRVAR,20,21,22,23,24,25,
1017 PRVAR,26,27,28,29,30,
1018 /COM,
1019 /COM, *****
1020 /COM, * Temperature Profile from center to lower right (45 deg.) *
1021 /COM, *****
1022 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts1i045,
1023 NSOL, 3,(NODE(      THWLL,      (0.0-THWLL),0.0)),TEMP,,t01i045,
1024 NSOL, 4,(NODE(      (THWLL+SWALL),      (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1025 NSOL, 5,(NODE(      (DATM-QCELL),      (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1026 NSOL, 6,(NODE(      DATM,      (0.0-DATM),0.0)),TEMP,,c01i045,
1027 NSOL, 7,(NODE(      (DATM+QCELL),      (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1028 NSOL, 8,(NODE(      (DATM+HCELL),      (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1029 NSOL, 9,(NODE(      (DATM+SCCELL),      (0.0-DATM-SCCELL),0.0)),TEMP,,t01o045,
1030 NSOL,10,(NODE(      (DAT1-HCELL),      (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1031 NSOL,11,(NODE(      (DAT1-QCELL),      (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1032 NSOL,12,(NODE(      DAT1,      (0.0-DAT1),0.0)),TEMP,,c11i045,
1033 NSOL,13,(NODE(      (DAT1+QCELL),      (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1034 NSOL,14,(NODE(      (DAT1+HCELL),      (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1035 NSOL,15,(NODE(      (DAT1+SCCELL),      (0.0-DAT1-SCCELL),0.0)),TEMP,,t11o045,
1036 NSOL,16,(NODE(      (DAT2-HCELL),      (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1037 NSOL,17,(NODE(      (DAT2-QCELL),      (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1038 NSOL,18,(NODE(      DAT2,      (0.0-DAT2),0.0)),TEMP,,c19i045,
1039 NSOL,19,(NODE(      (DAT2+QCELL),      (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1040 NSOL,20,(NODE(      (DAT2+HCELL),      (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1041 NSOL,21,(NODE(      (DAT2+SCCELL),      (0.0-DAT2-SCCELL),0.0)),TEMP,,t19o045,
1042 NSOL,22,(NODE(      DM45,      (-1.0*DM45),0.0)),TEMP,,i19o045,
1043 NSOL,23,(NODE(      DO45,      (-1.0*DO45),0.0)),TEMP,,o19o045,
1044 /COM, Add centers of assemblies 13 and 17
1045 NSOL,24,(NODE(      DAT2,      (-1.0*DAT1),0.0)),TEMP,,c13i045,
1046 NSOL,25,(NODE(      DAT1,      (-1.0*DAT2),0.0)),TEMP,,c17i045,
1047 PRVAR, 2, 3, 4, 5, 6, 7,
1048 PRVAR, 8, 9,10,11,12,13,
1049 PRVAR,14,15,16,17,18,19,
1050 PRVAR,20,21,22,23,24,25,
1051 /COM,
1052 /COM, *****
1053 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1054 /COM, *****
1055 NSOL, 2,(NODE(      0.0,(0.0-DATM),0.0)),TEMP,,ts2i180,
1056 NSOL, 3,(NODE(      (THWLL),(0.0-DATM),0.0)),TEMP,,t02i180,
1057 NSOL, 4,(NODE(      (THWLL+SWALL),(0.0-DATM),0.0)),TEMP,,s02i180,
1058 NSOL, 5,(NODE(      (DATM-QCELL),(0.0-DATM),0.0)),TEMP,,h02i180,
1059 NSOL, 6,(NODE(      (DATM),(0.0-DATM),0.0)),TEMP,,c02i180,
1060 NSOL, 7,(NODE(      (DATM+QCELL),(0.0-DATM),0.0)),TEMP,,h02o180,
1061 NSOL, 8,(NODE(      (DATM+HCELL),(0.0-DATM),0.0)),TEMP,,s02o180,
1062 NSOL, 9,(NODE(      (DATM+SCCELL),(0.0-DATM),0.0)),TEMP,,t02o180,
1063 NSOL,10,(NODE(      (DAT1-HCELL),(0.0-DATM),0.0)),TEMP,,s10i180,
1064 NSOL,11,(NODE(      (DAT1-QCELL),(0.0-DATM),0.0)),TEMP,,h10i180,
1065 NSOL,12,(NODE(      (DAT1),(0.0-DATM),0.0)),TEMP,,c10i180,
1066 NSOL,13,(NODE(      (DAT1+QCELL),(0.0-DATM),0.0)),TEMP,,h10o180,
1067 NSOL,14,(NODE(      (DAT1+HCELL),(0.0-DATM),0.0)),TEMP,,s10o180,
1068 NSOL,15,(NODE(      (DAT1+SCCELL),(0.0-DATM),0.0)),TEMP,,t10o180,

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1069 NSOL,16,(NODE(      (DAT2-HCELL),(0.0-DATM),0.0)),TEMP,,s16i180,
1070 NSOL,17,(NODE(      (DAT2-QCELL),(0.0-DATM),0.0)),TEMP,,h16i180,
1071 NSOL,18,(NODE(      (DAT2),(0.0-DATM),0.0)),TEMP,,c16i180,
1072 NSOL,19,(NODE(      (DAT2+QCELL),(0.0-DATM),0.0)),TEMP,,h16o180,
1073 NSOL,20,(NODE(      (DAT2+HCELL),(0.0-DATM),0.0)),TEMP,,s16o180,
1074 NSOL,21,(NODE(      (DAT2+SCELL),(0.0-DATM),0.0)),TEMP,,t16o180,
1075 NSOL,22,(NODE(      (DAT3-HCELL),(0.0-DATM),0.0)),TEMP,,s22i180,
1076 NSOL,23,(NODE(      (DAT3-QCELL),(0.0-DATM),0.0)),TEMP,,h22i180,
1077 NSOL,24,(NODE(      (DAT3),(0.0-DATM),0.0)),TEMP,,c22i180,
1078 NSOL,25,(NODE(      (DAT3+QCELL),(0.0-DATM),0.0)),TEMP,,h22o180,
1079 NSOL,26,(NODE(      (DAT3+HCELL),(0.0-DATM),0.0)),TEMP,,s22o180,
1080 NSOL,27,(NODE(      (DAT3+SCELL),(0.0-DATM),0.0)),TEMP,,t22o180,
1081 NSOL,28,(NODE((DCRAD-OWALL-IWALL),(0.0-DATM),0.0)),TEMP,,i22i180,
1082 NSOL,29,(NODE(      (DCRAD-OWALL),(0.0-DATM),0.0)),TEMP,,i22o180,
1083 NSOL,30,(NODE(      (DCRAD),(0.0-DATM),0.0)),TEMP,,o22o180,
1084 PRVAR, 2, 3, 4, 5, 6, 7,
1085 PRVAR, 8, 9,10,11,12,13,
1086 PRVAR,14,15,16,17,18,19,
1087 PRVAR,20,21,22,23,24,25,
1088 PRVAR,26,27,28,29,30,
1089 /COM, *****
1090 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1091 /COM, *****
1092 NSOL, 2,(NODE(      0.0,      DATM,0.0)),TEMP,,ts2i180,
1093 NSOL, 3,(NODE(      (THWLL),      DATM,0.0)),TEMP,,t02i180,
1094 NSOL, 4,(NODE(      (THWLL+SWALL),      DATM,0.0)),TEMP,,s02i180,
1095 NSOL, 5,(NODE(      (DATM-QCELL),      DATM,0.0)),TEMP,,h02i180,
1096 NSOL, 6,(NODE(      (DATM),      DATM,0.0)),TEMP,,c02i180,
1097 NSOL, 7,(NODE(      (DATM+QCELL),      DATM,0.0)),TEMP,,h02o180,
1098 NSOL, 8,(NODE(      (DATM+HCELL),      DATM,0.0)),TEMP,,s02o180,
1099 NSOL, 9,(NODE(      (DATM+SCELL),      DATM,0.0)),TEMP,,t02o180,
1100 NSOL,10,(NODE(      (DAT1-HCELL),      DATM,0.0)),TEMP,,s10i180,
1101 NSOL,11,(NODE(      (DAT1-QCELL),      DATM,0.0)),TEMP,,h10i180,
1102 NSOL,12,(NODE(      (DAT1),      DATM,0.0)),TEMP,,c10i180,
1103 NSOL,13,(NODE(      (DAT1+QCELL),      DATM,0.0)),TEMP,,h10o180,
1104 NSOL,14,(NODE(      (DAT1+HCELL),      DATM,0.0)),TEMP,,s10o180,
1105 NSOL,15,(NODE(      (DAT1+SCELL),      DATM,0.0)),TEMP,,t10o180,
1106 NSOL,16,(NODE(      (DAT2-HCELL),      DATM,0.0)),TEMP,,s16i180,
1107 NSOL,17,(NODE(      (DAT2-QCELL),      DATM,0.0)),TEMP,,h16i180,
1108 NSOL,18,(NODE(      (DAT2),      DATM,0.0)),TEMP,,c16i180,
1109 NSOL,19,(NODE(      (DAT2+QCELL),      DATM,0.0)),TEMP,,h16o180,
1110 NSOL,20,(NODE(      (DAT2+HCELL),      DATM,0.0)),TEMP,,s16o180,
1111 NSOL,21,(NODE(      (DAT2+SCELL),      DATM,0.0)),TEMP,,t16o180,
1112 NSOL,22,(NODE(      (DAT3-HCELL),      DATM,0.0)),TEMP,,s22i180,
1113 NSOL,23,(NODE(      (DAT3-QCELL),      DATM,0.0)),TEMP,,h22i180,
1114 NSOL,24,(NODE(      (DAT3),      DATM,0.0)),TEMP,,c22i180,
1115 NSOL,25,(NODE(      (DAT3+QCELL),      DATM,0.0)),TEMP,,h22o180,
1116 NSOL,26,(NODE(      (DAT3+HCELL),      DATM,0.0)),TEMP,,s22o180,
1117 NSOL,27,(NODE(      (DAT3+SCELL),      DATM,0.0)),TEMP,,t22o180,
1118 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1119 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1120 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1121 PRVAR, 2, 3, 4, 5, 6, 7,
1122 PRVAR, 8, 9,10,11,12,13,
1123 PRVAR,14,15,16,17,18,19,
1124 PRVAR,20,21,22,23,24,25,
1125 PRVAR,26,27,28,29,30,
1126 /COM,
1127 /COM, *****
1128 /COM, * Temperature Profile from center to upper right (135 deg.) *
1129 /COM, *****
1130 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1131 NSOL, 3,(NODE(      THWLL,      (THWLL),0.0)),TEMP,,t02i135,
1132 NSOL, 4,(NODE(      (THWLL+SWALL),      (THWLL+SWALL),0.0)),TEMP,,s02i135,
1133 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1134 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1135 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1136 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1137 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o135,
1138 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,

```

```

1139 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1140 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1141 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1142 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1143 NSOL,15,(NODE(      (DAT1+SCELL),      (DAT1+SCELL),0.0)),TEMP,,t12o135,
1144 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1145 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1146 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1147 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1148 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1149 NSOL,21,(NODE(      (DAT2+SCELL),      (DAT2+SCELL),0.0)),TEMP,,t20o135,
1150 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1151 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1152 /COM,      Add centers of assemblies 13 and 17
1153 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1154 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1155 PRVAR, 2, 3, 4, 5, 6, 7,
1156 PRVAR, 8, 9,10,11,12,13,
1157 PRVAR,14,15,16,17,18,19,
1158 PRVAR,20,21,22,23,24,25,
1159 /COM,
1160 /COM,      *****
1161 /COM,      *Temperature Profile from center offset to top of WP (180 deg.)*
1162 /COM,      *****
1163 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1164 NSOL, 3,(NODE(      DATM,      (THWLL),0.0)),TEMP,,t02i180,
1165 NSOL, 4,(NODE(      DATM,      (THWLL+SWALL),0.0)),TEMP,,s02i180,
1166 NSOL, 5,(NODE(      DATM,      (DATM-QCELL),0.0)),TEMP,,h02i180,
1167 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1168 NSOL, 7,(NODE(      DATM,      (DATM+QCELL),0.0)),TEMP,,h02o180,
1169 NSOL, 8,(NODE(      DATM,      (DATM+HCELL),0.0)),TEMP,,s02o180,
1170 NSOL, 9,(NODE(      DATM,      (DATM+SCELL),0.0)),TEMP,,t02o180,
1171 NSOL,10,(NODE(      DATM,      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1172 NSOL,11,(NODE(      DATM,      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1173 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1174 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1175 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1176 NSOL,15,(NODE(      DATM,      (DAT1+SCELL),0.0)),TEMP,,t10o180,
1177 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1178 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1179 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1180 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1181 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1182 NSOL,21,(NODE(      DATM,      (DAT2+SCELL),0.0)),TEMP,,t16o180,
1183 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1184 NSOL,23,(NODE(      DATM,      (DAT3-QCELL),0.0)),TEMP,,h22i180,
1185 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1186 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,
1187 NSOL,26,(NODE(      DATM,      (DAT3+HCELL),0.0)),TEMP,,s22o180,
1188 NSOL,27,(NODE(      DATM,      (DAT3+SCELL),0.0)),TEMP,,t22o180,
1189 NSOL,28,(NODE(      DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1190 NSOL,29,(NODE(      DATM,      (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1191 NSOL,30,(NODE(      DATM,      (DCRAD),0.0)),TEMP,,o22o180,
1192 PRVAR, 2, 3, 4, 5, 6, 7,
1193 PRVAR, 8, 9,10,11,12,13,
1194 PRVAR,14,15,16,17,18,19,
1195 PRVAR,20,21,22,23,24,25,
1196 PRVAR,26,27,28,29,30,
1197 FINISH
1198 /COM,      *****
1199 /COM,      End of batch input file
1200 /COM,      *****
1201 /EXIT,
1202 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

/INPUT FILE= /ansys50a/docu/start.ans LINE= 0

ANSYS STARTUP FILE start.ans

ABBREVIATION= K1 /pnum,kp ,1,
 ABBREVIATION= K0 /pnum,kp ,0,
 ABBREVIATION= L1 /pnum,line,1,
 ABBREVIATION= L0 /pnum,line,0,
 ABBREVIATION= A1 /pnum,area,1,
 ABBREVIATION= A0 /pnum,area,0,
 ABBREVIATION= V1 /pnum,volu,1,
 ABBREVIATION= V0 /pnum,volu,0,
 ABBREVIATION= N1 /pnum,node,1,
 ABBREVIATION= N0 /pnum,node,0,
 ABBREVIATION= E1 /pnum,elem,1,
 ABBREVIATION= E0 /pnum,elem,0,
 ABBREVIATION= M1 /pnum,mat,,1,
 ABBREVIATION= M0 /pnum,mat ,0,
 ABBREVIATION= R1 /pnum,real,1,
 ABBREVIATION= R0 /pnum,real,0,,
 ABBREVIATION= T1 /pnum,type,1,
 ABBREVIATION= T0 /pnum,type,0,
 ABBREVIATION= C1 /number,1,
 ABBREVIATION= C0 /number,0,
 ABBREVIATION= INP /input,,inp,
 ABBREVIATION= X3D /show,3d,
 ABBREVIATION= X11 /show,x11,
 ABBREVIATION= VEC /show,,,1,
 ABBREVIATION= RAS /show,,,0,,
 ABBREVIATION= ON /menu,on,
 ABBREVIATION= OFF /menu,off,
 ABBREVIATION= NVP /config,nvpag,512,
 ABBREVIATION= QUIT /exit,nosav,
 XYZ TRIAD DISPLAY SET TO OFF

VIEW CONE ANGLE FOR WINDOW 1 25.00

 END start.ans

To start ANSYS menu:...

type: x3d for console
 x11 for X-term

type: on

```
*****
*****
ANSYS REVISION  5.0A                               6/16/1995
2-D Model of 125 ton burnup credit UCF-DC          Thomas L. Lotz
*****
```

```
*
* File name: ucf44b.inp
*   44 BWR UCF with High T.L. Disposal Container
*   Helium Fill Gas
*
* Material Property file: props01.dat
*
* SNF Conductivity file: pwr15e.parm (Check for Changes)
*   GE-7 8x8 SNF BWR Assembly (Assumed Conservative)
*
* SNF Heat Loads file:   bwr1049.dat
*   SNF Type: 10 years old, 49000 MWd/MTU
*
* Surface Temp. file:    c21b5a.parm
*   83 MTU/acre (20.5 kgU/m^2) AML (High Thermal Loading)
*   5.0 m Diameter Drift with Concrete Invert
*   Drift spacing = 22.5 m
*   WP c/c spacing = 19.477 m
*
```

Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512

Work space must also be increased (-m 64)

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED

```
LENGTH      = METERS(M)
MASS         = KILOGRAMS(KG)
TIME         = SECONDS(SEC)
TEMPERATURE  = CENTIGRADE
CURRENT      = AMPS
```

Read in average effective conductivities from SNF model

```
*** NOTE ***                               CP= .700   TIME= 05:16:36
Restore ANSYS parameters from file= pwr15e.parm.
```

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

```
*** NOTE ***                               CP= .930   TIME= 05:16:36
Restore ANSYS parameters from file= c21b5a.parm.
```

/INPUT FILE= c21b5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

```
Define UCF/waste package parameters
(UCF dimensions converted from inches/cm/mm to meters were required)
MIRAD = inner radius of UCF He Backfill shell (m) (NOT
```

MWALL = UCF He Backfill shell thickness (m) (NOT
 DCRAD = disposal container outer radius (m)
 OWALL = outer barrier thickness (m)
 IWALL = inner barrier thickness (m)
 DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)
 GCORS = corner guide short side width (m)
 GWALL = basket guide thickness (m)
 GLEN1 = side guide 1/3 width (m) (NOT USED)
 GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)
 SWALL = stainless tube thickness (m)
 TWALL = Aluminum thermal shunt thickness (m)
 THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length
 PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0
 MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .8130000
 PARAMETER OWALL = .1000000
 PARAMETER IWALL = .2000000E-01
 PARAMETER DCIRD = .6930000

 PARAMETER GCORL = .3200000
 PARAMETER GCORS = .1816000
 PARAMETER GWALL = .9500000E-02
 GLEN1=9.6170*2.54/100.0
 GLENT=28.866*2.54/100.0

 PARAMETER HCELL = .7650000E-01
 PARAMETER SWALL = .7500000E-02
 PARAMETER TWALL = .2000000E-01
 PARAMETER THWLL = .1000000E-01

 PARAMETER ACTVL = 3.810000
 PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)
 FUEL = volumetric heat production (W/m3) f(yrs)
 FVOLU = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)
 QCELL = 1/4 of basket cell opening (m)
 SCELL = 1/2 of basket cell opening+SS wall(m)
 ACELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c
 GY## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)
 MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)
 DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.
DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVLU = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCELL = .8000000E-01
ACELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)
MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5748778

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
TM_START = start time (sec)
TMI* = time increment for solution (sec)
TME* = start and stop for time do-loops (sec)
TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760

PARAMETER TM10 = 3155760.

PARAMETER TM11 = .3155760E+08

PARAMETER TM110 = .3155760E+09

PARAMETER TM1100 = .3155760E+10

PARAMETER TM11000 = .3155760E+11

PARAMETER TME0 = .2840187E+08

PARAMETER TME1 = .3155763E+08

PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:16:37 JUN 17, 1995 CP= 1.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
 KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **

** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density: DENS (kg/m^3) **

** Emissivity EMIS **

** Conductivity: KXX (W/m/K) **

** Specific Heat: C (J/kg/K) **

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 NUM. POINTS= 1

SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1

SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1

SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1

SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1

SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1

SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1

SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1

SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 21.11000 37.78000 65.56000
93.33000 121.1100 148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 176.6700 204.4400 232.2200
260.0000 287.7800 315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 343.3300 371.1100 398.8900
426.6700 454.4400 482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 510.0000 537.7800 565.5600
593.3300 621.1100 648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***

SLOC= 25	676.6700 760.0000	704.4400 787.7800	732.2200 815.5600	
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6				
SLOC= 1	13.33000 15.06000	13.67000 15.58000	14.19000	14.54000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12				
SLOC= 7	15.92000 17.83000	16.44000 18.17000	16.96000	17.31000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18				
SLOC= 13	18.52000 20.25000	19.04000 20.77000	19.38000	19.90000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24				
SLOC= 19	21.11000 22.67000	21.46000 23.02000	21.98000	22.33000
PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30				
SLOC= 25	23.54000 24.92000	23.88000 25.27000	24.23000	24.58000
PROPERTY TABLE C MAT= 1 NUM. POINTS= 6				
SLOC= 1	481.6800 509.9800	486.9200 520.2900	498.0900	499.3800
PROPERTY TABLE C MAT= 1 NUM. POINTS= 12				
SLOC= 7	521.0700 543.0200	527.3800 543.3100	536.9200	537.3400
PROPERTY TABLE C MAT= 1 NUM. POINTS= 18				
SLOC= 13	546.9100 557.2500	552.1400 565.1100	552.2600	557.2200
PROPERTY TABLE C MAT= 1 NUM. POINTS= 24				
SLOC= 19	565.0100 574.9200	564.9100 574.6800	572.3500	572.1400
PROPERTY TABLE C MAT= 1 NUM. POINTS= 30				
SLOC= 25	581.6400 585.9600	581.3000 588.3900	583.8600	586.3600
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6				
SLOC= 1	40.84000 42.23000	41.36000 42.23000	41.88000	42.23000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12				
SLOC= 7	42.06000 40.50000	41.88000 39.98000	41.36000	41.02000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 18				
SLOC= 13	39.29000 36.69000	38.77000 36.17000	38.08000	37.56000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 24				
SLOC= 19	35.48000 32.36000	34.61000 31.50000	33.92000	33.23000
PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 30				
SLOC= 25	30.29000 26.13000	28.90000 26.13000	27.35000	26.48000
PROPERTY TABLE C MAT= 3 NUM. POINTS= 6				
SLOC= 1	428.7200 486.0800	444.9500 495.6600	460.9400	476.8700
PROPERTY TABLE C MAT= 3 NUM. POINTS= 12				
SLOC= 7	506.0900 543.6300	517.0700 550.6200	525.6400	536.9900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 18
 SLOC= 13 562.2100 577.3200 589.1000 600.5700
 611.3500 629.0900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 24
 SLOC= 19 645.3200 665.1200 682.0700 694.5200
 724.0700 761.9500

PROPERTY TABLE C MAT= 3 NUM. POINTS= 30
 SLOC= 25 806.3100 888.6000 1095.040 1638.780
 808.6800 736.9000

Define K for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 593.3300 621.1100 648.8900
 676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 27 ***
 SLOC= 25 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 6
 SLOC= 1 12.29000 12.63000 13.15000 13.67000
 14.02000 14.54000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 12
 SLOC= 7 14.88000 15.40000 15.75000 16.10000
 16.61000 16.96000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 18
 SLOC= 13 17.31000 17.65000 18.00000 18.52000
 18.86000 19.21000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200

510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
 SLOC= 1 460.6900 477.4200 501.0200 504.6500
 498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
 SLOC= 7 536.8800 559.8500 576.8300 576.2100
 581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
 SLOC= 13 619.5800 636.7600 654.2000 678.2500
 696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 .000000E+00 10.00000 20.00000
 30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 60.00000 70.00000 80.00000
 90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 120.0000 130.0000 140.0000
 150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 180.0000 190.0000 200.0000
 210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 240.0000 250.0000 260.0000
 270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
 SLOC= 31 300.0000 310.0000 320.0000
 330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
 SLOC= 37 360.0000 370.0000 380.0000
 390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
 SLOC= 43 420.0000 430.0000 440.0000
 450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
 SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
 SLOC= 1 8.720000 8.540000 8.360000 8.190000
 8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
 SLOC= 7 7.720000 7.580000 7.440000 7.310000
 7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
 SLOC= 13 6.930000 6.820000 6.700000 6.600000
 6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
 SLOC= 19 6.290000 6.190000 6.100000 6.010000
 5.920000 5.840000

PROPERTY TABLE KXX	MAT=	4	NUM. POINTS= 30	
SLOC= 25	5.760000	5.680000	5.600000	5.520000
	5.450000	5.380000		

PROPERTY TABLE KXX	MAT=	4	NUM. POINTS= 36	
SLOC= 31	5.310000	5.240000	5.180000	5.110000
	5.050000	4.990000		

PROPERTY TABLE KXX	MAT=	4	NUM. POINTS= 42	
SLOC= 37	4.930000	4.870000	4.810000	4.760000
	4.700000	4.650000		

PROPERTY TABLE KXX	MAT=	4	NUM. POINTS= 48	
SLOC= 43	4.600000	4.550000	4.500000	4.450000
	4.400000	4.350000		

PROPERTY TABLE KXX	MAT=	4	NUM. POINTS= 50	
SLOC= 48	4.310000	4.270000	4.220000	

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 6	
SLOC= 1	12.29000	12.44000	12.58000	12.72000
	12.87000	13.01000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 12	
SLOC= 7	13.15000	13.28000	13.42000	13.55000
	13.69000	13.82000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 18	
SLOC= 13	13.95000	14.08000	14.21000	14.34000
	14.46000	14.59000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 24	
SLOC= 19	14.72000	14.84000	14.96000	15.09000
	15.21000	15.33000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 30	
SLOC= 25	15.45000	15.57000	15.69000	15.81000
	15.93000	16.05000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 36	
SLOC= 31	16.17000	16.29000	16.40000	16.52000
	16.64000	16.76000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 42	
SLOC= 37	16.88000	16.99000	17.11000	17.23000
	17.35000	17.46000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 48	
SLOC= 43	17.58000	17.70000	17.82000	17.94000
	18.06000	18.18000		

PROPERTY TABLE KXX	MAT=	5	NUM. POINTS= 50	
SLOC= 48	18.30000	18.42000	18.54000	

PROPERTY TABLE KXX	MAT=	6	NUM. POINTS= 6	
SLOC= 1	1.940000	1.940000	1.940000	1.940000
	1.940000	1.940000		

PROPERTY TABLE KXX	MAT=	6	NUM. POINTS= 12	
SLOC= 7	1.940000	1.950000	1.950000	1.950000
	1.950000	1.950000		

PROPERTY TABLE KXX	MAT=	6	NUM. POINTS= 18	
SLOC= 13	1.950000	1.950000	1.960000	1.960000
	1.960000	1.960000		

PROPERTY TABLE KXX	MAT=	6	NUM. POINTS= 24	
SLOC= 19	1.960000	1.970000	1.970000	1.970000
	1.970000	1.980000		

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
 SLOC= 25 1.980000 1.980000 1.990000
 1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
 SLOC= 31 2.000000 2.000000 2.010000
 2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
 SLOC= 37 2.020000 2.020000 2.030000
 2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
 SLOC= 43 2.040000 2.040000 2.050000
 2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
 SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 -13.15000 6.850000 26.85000
 76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 226.8500 276.8500 326.8500
 376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
 SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
 SLOC= 1 .1875000 .1750000 .1625000 .1422000
 .1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
 SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
 .6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
 SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 6
 SLOC= 1 .1370000 .1450000 .1520000 .1700000
 .1870000 .2040000

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 12
 SLOC= 7 .2200000 .2360000 .2520000 .2640000
 .2780000 .2910000

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 15
 SLOC= 13 .3040000 .3300000 .3540000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 6
 SLOC= 1 1.348000 1.254700 1.161400 .9950000
 .8711000 .7740000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 12
 SLOC= 7 .6964000 .6329000 .5804000 .5356000
 .4975000 .4643000

PROPERTY TABLE DENS MAT= 8 NUM. POINTS= 15
 SLOC= 13 .4354000 .3868000 .3482000

PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 6
 SLOC= 1 .2300000E-01 .2500000E-01 .2600000E-01 .3000000E-01

```

      .3400000E-01 .3700000E-01

PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 12
SLOC= 7 .4100000E-01 .4400000E-01 .4700000E-01 .5000000E-01
      .5200000E-01 .5500000E-01

PROPERTY TABLE KXX MAT= 8 NUM. POINTS= 15
SLOC= 13 .5700000E-01 .6200000E-01 .6700000E-01

PROPERTY TABLE C MAT= 8 NUM. POINTS= 6
SLOC= 1 1006.200 1006.600 1007.000 1009.000
      1014.000 1021.000

PROPERTY TABLE C MAT= 8 NUM. POINTS= 12
SLOC= 7 1030.000 1040.000 1051.000 1063.000
      1075.000 1087.000

PROPERTY TABLE C MAT= 8 NUM. POINTS= 15
SLOC= 13 1099.000 1121.000 1141.000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 6
SLOC= 1 1.303700 1.213500 1.123300 .9625000
      .8425000 .7485000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 12
SLOC= 7 .6739000 .6124000 .5615000 .5214000
      .4812000 .4512000

PROPERTY TABLE DENS MAT= 9 NUM. POINTS= 15
SLOC= 13 .4211000 .3743000 .3368000

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 6
SLOC= 1 .2300000E-01 .2400000E-01 .2600000E-01 .2900000E-01
      .3300000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 12
SLOC= 7 .3900000E-01 .4200000E-01 .4500000E-01 .4700000E-01
      .5000000E-01 .5200000E-01

PROPERTY TABLE KXX MAT= 9 NUM. POINTS= 15
SLOC= 13 .5500000E-01 .6000000E-01 .6500000E-01

PROPERTY TABLE C MAT= 9 NUM. POINTS= 6
SLOC= 1 1041.800 1041.400 1041.000 1042.000
      1045.000 1050.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 12
SLOC= 7 1056.000 1065.000 1075.000 1086.500
      1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
      .2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
      .3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

```

Define K and C for material 12

TEMPERATURE TABLE ERASED.

```

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500

```

	326.8500	526.8500	726.8500	
PROPERTY TABLE KXX	MAT= 12	NUM. POINTS= 6		
SLOC= 1	413.0000	401.0000	393.0000	379.0000
	366.0000	352.0000		

PROPERTY TABLE C	MAT= 12	NUM. POINTS= 6		
SLOC= 1	356.0000	385.0000	397.0000	417.0000
	433.0000	451.0000		

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***

SLOC= 1	23.00000	50.00000	100.0000
	150.0000	200.0000	

PROPERTY TABLE KXX	MAT= 13	NUM. POINTS= 5		
SLOC= 1	182.5600	190.1700	199.2200	202.9100
	203.7200			

PROPERTY TABLE C	MAT= 13	NUM. POINTS= 5		
SLOC= 1	868.0000	903.0000	946.0000	976.0000
	998.0000			

 ** End of Material Property List **

 Read in single assembly heat loads
 Calculate the volumetric heat generation
 (Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

 ** History of SNF Assembly Heat Generation Rates **
 ** Output of PHIA, SCSI: B00000000-01717-1200-3000X Rev.00B **
 **
 ** Executable File Name: PHIA00B.EXE **
 ** Output File Name: bwr1049.dat **
 ** Execution Date: 03/07/95 **
 ** Start Age (years): 10.0 **
 ** Decay Period (years): 10000 **
 ** Enrichment (percent): 3.74 **
 ** Burnup (MWd/MTU): 49000 **
 ** Assembly Type: BWR **
 ** SNF U Mass (MTU/assy): 0.200 **
 **
 ** ASSY(#,1) is the SNF assembly heat in Watts. **
 ** ASSY(#,0) is the time post emplacement in years. **

PARAMETER ASSY(1,1) =	409.4200	409.2500	409.0700	408.9000
	408.7300	408.5500		

PARAMETER ASSY(7,1) =	408.3800	408.2000	408.0300	407.8600
	407.6800	406.8200		

PARAMETER ASSY(13,1) =	405.9700	405.1200	404.2800	403.4400
	402.6100	401.7900		

PARAMETER ASSY(19,1) =	400.9700	400.1500	399.3400	398.5400
	397.7400	396.9500		

PARAMETER ASSY(25,1) =	396.1600	395.3800	394.6000	393.8300
	393.0600	386.0700		

PARAMETER ASSY(31,1) =	379.4900	373.4300	367.7000	362.3600
	357.2900	352.6900		

PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000
PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000	550.0000	600.0000	650.0000

	700.0000	750.0000		
PARAMETER ASSY(79,0) =	800.0000	850.0000	900.0000	950.0000
	1000.000	1500.000		
PARAMETER ASSY(85,0) =	2000.000	2500.000	3000.000	3500.000
	4000.000	4500.000		
PARAMETER ASSY(91,0) =	5000.000	5500.000	6000.000	6500.000
	7000.000	7500.000		
PARAMETER ASSY(97,0) =	8000.000	8500.000	9000.000	9500.000
	10000.00			

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)
 INPUT MATRIX= ASSY(1,0)
 INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS
 RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN
 FUEL(1) = COPY ASSY(1)
 SCALE FACTORS RESULT= 15.697 INPUT= 1.0000
 VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity
 Density: DENS (kg/m^3)
 Conductivity: KXX (W/m/K)
 Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
 SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
 SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
 SLOC= 1 274.0000
 Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
 SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.00000 TO 400.00000 BY 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***

SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Construct geometry for Disposal Container

Define center and axis keypoints for waste package

Also, create placeholder keypoints and lines

(K's 1,2,3,4,5,6,7,8)

(L's 1,2,3,4)

KEYPOINT	1	X,Y,Z=	.000000E+00	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	2	X,Y,Z=	.000000E+00	.000000E+00	1.00000	IN CSYS= 0
KEYPOINT	3	X,Y,Z=	.000000E+00	.000000E+00	1.30000	IN CSYS= 0
KEYPOINT	4	X,Y,Z=	.000000E+00	.000000E+00	1.40000	IN CSYS= 0
KEYPOINT	5	X,Y,Z=	.000000E+00	.000000E+00	1.50000	IN CSYS= 0
KEYPOINT	6	X,Y,Z=	.000000E+00	.000000E+00	1.60000	IN CSYS= 0
KEYPOINT	7	X,Y,Z=	.000000E+00	.000000E+00	1.70000	IN CSYS= 0
KEYPOINT	8	X,Y,Z=	.000000E+00	.000000E+00	1.80000	IN CSYS= 0

LINE CONNECTS KEYPOINTS	3	4
LINE NO.= 1	KP1= 3	TAN1= .0000 .0000 -1.0000
	KP2= 4	TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS	4	5
LINE NO.= 2	KP1= 4	TAN1= .0000 .0000 -1.0000
	KP2= 5	TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS	5	6
LINE NO.= 3	KP1= 5	TAN1= .0000 .0000 -1.0000
	KP2= 6	TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS	6	7
LINE NO.= 4	KP1= 6	TAN1= .0000 .0000 -1.0000
	KP2= 7	TAN2= .0000 .0000 1.0000

Define disposal container outer radius and material interface

(K's 9,10,11,12,13,14)

(L's 5,6,7,8,9,10,11)

(A's 1,2)

KEYPOINT	9	X,Y,Z=	.000000E+00	-.813000	.000000E+00	IN CSYS= 0
KEYPOINT	10	X,Y,Z=	.813000	.000000E+00	.000000E+00	IN CSYS= 0

KEYPOINT 11 X,Y,Z= .000000E+00 .813000 .000000E+00 IN CSYS= 0
 KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .81300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .81300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

 Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0

KEYPOINT	20	X,Y,Z=	.490025	.490025	.000000E+00	IN CSYS=	0
KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS=	0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS=	0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS=	0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS=	0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS=	0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS=	0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS=	0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS=	0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS=	0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS=	0

LINE CONNECTS KEYPOINTS 14 15
 LINE NO.= 12 KP1= 14 TAN1= .0000 1.0000 .0000
 KP2= 15 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 16 AND 15 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 13 KP1= 16 TAN1= .9999 -.0144 .0000
 KP2= 15 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 17 AND 16 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 14 KP1= 17 TAN1= .9694 -.2453 .0000
 KP2= 16 TAN2= -.9999 .0144 .0000

ARC BETWEEN KEYPOINTS 18 AND 17 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 15 KP1= 18 TAN1= .9659 -.2590 .0000
 KP2= 17 TAN2= -.9694 .2453 .0000

ARC BETWEEN KEYPOINTS 19 AND 18 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 16 KP1= 19 TAN1= .7208 -.6932 .0000
 KP2= 18 TAN2= -.9659 .2590 .0000

ARC BETWEEN KEYPOINTS 20 AND 19 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 17 KP1= 20 TAN1= .7071 -.7071 .0000
 KP2= 19 TAN2= -.7208 .6932 .0000

ARC BETWEEN KEYPOINTS 21 AND 20 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 18 KP1= 21 TAN1= .6932 -.7208 .0000
 KP2= 20 TAN2= -.7071 .7071 .0000

ARC BETWEEN KEYPOINTS 22 AND 21 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 19 KP1= 22 TAN1= .2590 -.9659 .0000
 KP2= 21 TAN2= -.6932 .7208 .0000

ARC BETWEEN KEYPOINTS	23 AND	22	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	20	KP1=	23	TAN1=	.2453	-.9694 .0000
		KP2=	22	TAN2=	-.2590	.9659 .0000
ARC BETWEEN KEYPOINTS	24 AND	23	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	21	KP1=	24	TAN1=	.0144	-.9999 .0000
		KP2=	23	TAN2=	-.2453	.9694 .0000
ARC BETWEEN KEYPOINTS	25 AND	24	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	22	KP1=	25	TAN1=	.0000	-1.0000 .0000
		KP2=	24	TAN2=	-.0144	.9999 .0000
ARC BETWEEN KEYPOINTS	26 AND	25	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	23	KP1=	26	TAN1=	-.0144	-.9999 .0000
		KP2=	25	TAN2=	.0000	1.0000 .0000
ARC BETWEEN KEYPOINTS	27 AND	26	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	24	KP1=	27	TAN1=	-.2453	-.9694 .0000
		KP2=	26	TAN2=	.0144	.9999 .0000
ARC BETWEEN KEYPOINTS	28 AND	27	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	25	KP1=	28	TAN1=	-.2590	-.9659 .0000
		KP2=	27	TAN2=	.2453	.9694 .0000
ARC BETWEEN KEYPOINTS	29 AND	28	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	26	KP1=	29	TAN1=	-.6932	-.7208 .0000
		KP2=	28	TAN2=	.2590	.9659 .0000
ARC BETWEEN KEYPOINTS	30 AND	29	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	27	KP1=	30	TAN1=	-.7071	-.7071 .0000
		KP2=	29	TAN2=	.6932	.7208 .0000
ARC BETWEEN KEYPOINTS	31 AND	30	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	28	KP1=	31	TAN1=	-.7208	-.6932 .0000
		KP2=	30	TAN2=	.7071	.7071 .0000
ARC BETWEEN KEYPOINTS	32 AND	31	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	29	KP1=	32	TAN1=	-.9659	-.2590 .0000
		KP2=	31	TAN2=	.7208	.6932 .0000
ARC BETWEEN KEYPOINTS	33 AND	32	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	30	KP1=	33	TAN1=	-.9694	-.2453 .0000
		KP2=	32	TAN2=	.9659	.2590 .0000
ARC BETWEEN KEYPOINTS	34 AND	33	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	31	KP1=	34	TAN1=	-.9999	-.0144 .0000
		KP2=	33	TAN2=	.9694	.2453 .0000
ARC BETWEEN KEYPOINTS	35 AND	34	ORIENTATION KEYPOINT=			1
RADIUS=	.69300					
LINE NO.=	32	KP1=	35	TAN1=	-1.0000	.0000 .0000
		KP2=	34	TAN2=	.9999	.0144 .0000
LINE CONNECTS KEYPOINTS	12	35				
LINE NO.=	33	KP1=	12	TAN1=	.0000	-1.0000 .0000
		KP2=	35	TAN2=	.0000	1.0000 .0000

LINE CONNECTS KEYPOINTS 25 13
 LINE NO.= 34 KP1= 25 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
 LINE LIST = ALL SELECTED LINES
 (TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
 LINE LIST = ALL SELECTED LINES
 (TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)

(51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)

(L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)

(50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)

(67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)

(84,85,86,87,88,89,90,91,92)

(A's 5 - 26)

horizontal thermal shunt

KEYPOINT 36 X,Y,Z= .000000E+00 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 37 X,Y,Z= .000000E+00 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 38 X,Y,Z= .100000E-01 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 39 X,Y,Z= .100000E-01 .000000E+00 .000000E+00 IN CSYS= 0

KEYPOINT	40	X,Y,Z=	.100000E-01	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS=	0
vertical thermal shunt							
KEYPOINT	53	X,Y,Z=	.000000E+00	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS=	0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS=	0
Lines; shunt widths, horizontal then vertical: (35-57)							

LINE CONNECTS KEYPOINTS		36	1				
LINE NO.=	35	KP1=	36	TAN1=	.0000	-1.0000	.0000
		KP2=	1	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		1	37				
LINE NO.=	36	KP1=	1	TAN1=	.0000	-1.0000	.0000
		KP2=	37	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		38	39				
LINE NO.=	37	KP1=	38	TAN1=	.0000	-1.0000	.0000

	KP2=	39	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		39	40			
LINE NO.=	38	KP1=	39	TAN1=	.0000	-1.0000
		KP2=	40	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		41	42			
LINE NO.=	39	KP1=	41	TAN1=	.0000	-1.0000
		KP2=	42	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		42	43			
LINE NO.=	40	KP1=	42	TAN1=	.0000	-1.0000
		KP2=	43	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		44	45			
LINE NO.=	41	KP1=	44	TAN1=	.0000	-1.0000
		KP2=	45	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		45	46			
LINE NO.=	42	KP1=	45	TAN1=	.0000	-1.0000
		KP2=	46	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		47	48			
LINE NO.=	43	KP1=	47	TAN1=	.0000	-1.0000
		KP2=	48	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		48	49			
LINE NO.=	44	KP1=	48	TAN1=	.0000	-1.0000
		KP2=	49	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		50	51			
LINE NO.=	45	KP1=	50	TAN1=	.0000	-1.0000
		KP2=	51	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		51	52			
LINE NO.=	46	KP1=	51	TAN1=	.0000	-1.0000
		KP2=	52	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS		53	54			
LINE NO.=	47	KP1=	53	TAN1=	-1.0000	.0000
		KP2=	54	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		55	56			
LINE NO.=	48	KP1=	55	TAN1=	-1.0000	.0000
		KP2=	56	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		57	58			
LINE NO.=	49	KP1=	57	TAN1=	-1.0000	.0000
		KP2=	58	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		59	60			
LINE NO.=	50	KP1=	59	TAN1=	-1.0000	.0000
		KP2=	60	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		37	40			
LINE NO.=	51	KP1=	37	TAN1=	-1.0000	.0000
		KP2=	40	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		1	39			
LINE NO.=	52	KP1=	1	TAN1=	-1.0000	.0000
		KP2=	39	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		36	38			
LINE NO.=	53	KP1=	36	TAN1=	-1.0000	.0000
		KP2=	38	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS		61	62			
LINE NO.=	54	KP1=	61	TAN1=	-1.0000	.0000
		KP2=	62	TAN2=	1.0000	.0000

LINE CONNECTS KEYPOINTS 63 64
 LINE NO.= 55 KP1= 63 TAN1= -1.0000 .0000 .0000
 KP2= 64 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 65 66
 LINE NO.= 56 KP1= 65 TAN1= -1.0000 .0000 .0000
 KP2= 66 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 67 68
 LINE NO.= 57 KP1= 67 TAN1= -1.0000 .0000 .0000
 KP2= 68 TAN2= 1.0000 .0000 .0000

Lines; shunt edges, horizontal then vertical: (58-92)

LINE CONNECTS KEYPOINTS 38 41
 LINE NO.= 58 KP1= 38 TAN1= -1.0000 .0000 .0000
 KP2= 41 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 39 42
 LINE NO.= 59 KP1= 39 TAN1= -1.0000 .0000 .0000
 KP2= 42 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 40 43
 LINE NO.= 60 KP1= 40 TAN1= -1.0000 .0000 .0000
 KP2= 43 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 41 44
 LINE NO.= 61 KP1= 41 TAN1= -1.0000 .0000 .0000
 KP2= 44 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 42 45
 LINE NO.= 62 KP1= 42 TAN1= -1.0000 .0000 .0000
 KP2= 45 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 43 46
 LINE NO.= 63 KP1= 43 TAN1= -1.0000 .0000 .0000
 KP2= 46 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 44 47
 LINE NO.= 64 KP1= 44 TAN1= -1.0000 .0000 .0000
 KP2= 47 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 45 48
 LINE NO.= 65 KP1= 45 TAN1= -1.0000 .0000 .0000
 KP2= 48 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 46 49
 LINE NO.= 66 KP1= 46 TAN1= -1.0000 .0000 .0000
 KP2= 49 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 47 50
 LINE NO.= 67 KP1= 47 TAN1= -1.0000 .0000 .0000
 KP2= 50 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 48 51
 LINE NO.= 68 KP1= 48 TAN1= -1.0000 .0000 .0000
 KP2= 51 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 49 52
 LINE NO.= 69 KP1= 49 TAN1= -1.0000 .0000 .0000
 KP2= 52 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 26 50
 LINE NO.= 70 KP1= 26 TAN1= 1.0000 .0000 .0000
 KP2= 50 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 25 51
 LINE NO.= 71 KP1= 25 TAN1= 1.0000 .0000 .0000
 KP2= 51 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 52 24

LINE NO.=	72	KP1=	52	TAN1=	-1.0000	.0000	.0000
		KP2=	24	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 15 53							
LINE NO.=	73	KP1=	15	TAN1=	.0000	1.0000	.0000
		KP2=	53	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 16 54							
LINE NO.=	74	KP1=	16	TAN1=	.0000	1.0000	.0000
		KP2=	54	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 53 55							
LINE NO.=	75	KP1=	53	TAN1=	.0000	1.0000	.0000
		KP2=	55	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 54 56							
LINE NO.=	76	KP1=	54	TAN1=	.0000	1.0000	.0000
		KP2=	56	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 55 57							
LINE NO.=	77	KP1=	55	TAN1=	.0000	1.0000	.0000
		KP2=	57	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 56 58							
LINE NO.=	78	KP1=	56	TAN1=	.0000	1.0000	.0000
		KP2=	58	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 57 59							
LINE NO.=	79	KP1=	57	TAN1=	.0000	1.0000	.0000
		KP2=	59	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 58 60							
LINE NO.=	80	KP1=	58	TAN1=	.0000	1.0000	.0000
		KP2=	60	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 59 37							
LINE NO.=	81	KP1=	59	TAN1=	.0000	1.0000	.0000
		KP2=	37	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 60 40							
LINE NO.=	82	KP1=	60	TAN1=	.0000	1.0000	.0000
		KP2=	40	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 36 61							
LINE NO.=	83	KP1=	36	TAN1=	.0000	1.0000	.0000
		KP2=	61	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 38 62							
LINE NO.=	84	KP1=	38	TAN1=	.0000	1.0000	.0000
		KP2=	62	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 61 63							
LINE NO.=	85	KP1=	61	TAN1=	.0000	1.0000	.0000
		KP2=	63	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 62 64							
LINE NO.=	86	KP1=	62	TAN1=	.0000	1.0000	.0000
		KP2=	64	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 63 65							
LINE NO.=	87	KP1=	63	TAN1=	.0000	1.0000	.0000
		KP2=	65	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 64 66							
LINE NO.=	88	KP1=	64	TAN1=	.0000	1.0000	.0000
		KP2=	66	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 65 67							
LINE NO.=	89	KP1=	65	TAN1=	.0000	1.0000	.0000
		KP2=	67	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS 66 68
 LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
 KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
 LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
 KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
 LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
 KP2= 34 TAN2= .0000 -1.0000 .0000
 define areas for thermal shunts

DEFINE AREA BY LIST OF LINES
 LINE LIST = 35 53 37 52
 (TRAVERSED IN SAME DIRECTION AS LINE 35)
 AREA NUMBER = 5

DEFINE AREA BY LIST OF LINES
 LINE LIST = 36 52 38 51
 (TRAVERSED IN SAME DIRECTION AS LINE 36)
 AREA NUMBER = 6

DEFINE AREA BY LIST OF LINES
 LINE LIST = 37 58 39 59
 (TRAVERSED IN SAME DIRECTION AS LINE 37)
 AREA NUMBER = 7

DEFINE AREA BY LIST OF LINES
 LINE LIST = 38 59 40 60
 (TRAVERSED IN SAME DIRECTION AS LINE 38)
 AREA NUMBER = 8

DEFINE AREA BY LIST OF LINES
 LINE LIST = 39 61 41 62
 (TRAVERSED IN SAME DIRECTION AS LINE 39)
 AREA NUMBER = 9

DEFINE AREA BY LIST OF LINES
 LINE LIST = 40 62 42 63
 (TRAVERSED IN SAME DIRECTION AS LINE 40)
 AREA NUMBER = 10

DEFINE AREA BY LIST OF LINES
 LINE LIST = 41 64 43 65
 (TRAVERSED IN SAME DIRECTION AS LINE 41)
 AREA NUMBER = 11

DEFINE AREA BY LIST OF LINES
 LINE LIST = 42 65 44 66
 (TRAVERSED IN SAME DIRECTION AS LINE 42)
 AREA NUMBER = 12

DEFINE AREA BY LIST OF LINES
 LINE LIST = 43 67 45 68
 (TRAVERSED IN SAME DIRECTION AS LINE 43)
 AREA NUMBER = 13

DEFINE AREA BY LIST OF LINES
 LINE LIST = 44 68 46 69

```
(TRAVERSED IN SAME DIRECTION AS LINE 44)
AREA NUMBER = 14
DEFINE AREA BY LIST OF LINES
LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)
AREA NUMBER = 15
DEFINE AREA BY LIST OF LINES
LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)
AREA NUMBER = 16
DEFINE AREA BY LIST OF LINES
LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)
AREA NUMBER = 17
DEFINE AREA BY LIST OF LINES
LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)
AREA NUMBER = 18
DEFINE AREA BY LIST OF LINES
LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)
AREA NUMBER = 19
DEFINE AREA BY LIST OF LINES
LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)
AREA NUMBER = 20
DEFINE AREA BY LIST OF LINES
LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)
AREA NUMBER = 21
DEFINE AREA BY LIST OF LINES
LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)
AREA NUMBER = 22
DEFINE AREA BY LIST OF LINES
LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)
AREA NUMBER = 23
DEFINE AREA BY LIST OF LINES
LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)
AREA NUMBER = 24
DEFINE AREA BY LIST OF LINES
LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)
AREA NUMBER = 25
```

DEFINE AREA BY LIST OF LINES

LINE LIST = 91 32 92 57
(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
		bottom guide				
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS 69 17

LINE NO.= 93 KP1= 69 TAN1= .0000 -1.0000 .0000
KP2= 17 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 18 70

LINE NO.= 94 KP1= 18 TAN1= .0000 1.0000 .0000

	KP2=	70	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		71	69			
LINE NO.= 95	KP1=	71	TAN1=	.0000	-1.0000	.0000
	KP2=	69	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		70	72			
LINE NO.= 96	KP1=	70	TAN1=	.0000	1.0000	.0000
	KP2=	72	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		73	71			
LINE NO.= 97	KP1=	73	TAN1=	1.0000	.0000	.0000
	KP2=	71	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		72	74			
LINE NO.= 98	KP1=	72	TAN1=	-1.0000	.0000	.0000
	KP2=	74	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		20	73			
LINE NO.= 99	KP1=	20	TAN1=	1.0000	.0002	.0000
	KP2=	73	TAN2=	-1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS		74	19			
LINE NO.= 100	KP1=	74	TAN1=	-1.0000	.0000	.0000
	KP2=	19	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		75	20			
LINE NO.= 101	KP1=	75	TAN1=	-.0002	-1.0000	.0000
	KP2=	20	TAN2=	.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS		21	76			
LINE NO.= 102	KP1=	21	TAN1=	.0000	1.0000	.0000
	KP2=	76	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		77	75			
LINE NO.= 103	KP1=	77	TAN1=	.0000	-1.0000	.0000
	KP2=	75	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS		76	78			
LINE NO.= 104	KP1=	76	TAN1=	.0000	1.0000	.0000
	KP2=	78	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS		79	77			
LINE NO.= 105	KP1=	79	TAN1=	1.0000	.0000	.0000
	KP2=	77	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		78	80			
LINE NO.= 106	KP1=	78	TAN1=	-1.0000	.0000	.0000
	KP2=	80	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		23	79			
LINE NO.= 107	KP1=	23	TAN1=	1.0000	.0000	.0000
	KP2=	79	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		80	22			
LINE NO.= 108	KP1=	80	TAN1=	-1.0000	.0000	.0000
	KP2=	22	TAN2=	1.0000	.0000	.0000
bottom guide						
LINE CONNECTS KEYPOINTS		81	27			
LINE NO.= 109	KP1=	81	TAN1=	-1.0000	.0000	.0000
	KP2=	27	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		28	82			
LINE NO.= 110	KP1=	28	TAN1=	1.0000	.0000	.0000
	KP2=	82	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		83	81			
LINE NO.= 111	KP1=	83	TAN1=	-1.0000	.0000	.0000
	KP2=	81	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	82	84			
LINE NO.= 112 KP1=	82	TAN1=	1.0000	.0000	.0000
KP2=	84	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	85	83			
LINE NO.= 113 KP1=	85	TAN1=	.0000	-1.0000	.0000
KP2=	83	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	84	86			
LINE NO.= 114 KP1=	84	TAN1=	.0000	1.0000	.0000
KP2=	86	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	30	85			
LINE NO.= 115 KP1=	30	TAN1=	.0002	-1.0000	.0000
KP2=	85	TAN2=	-.0002	1.0000	.0000

LINE CONNECTS KEYPOINTS	86	29			
LINE NO.= 116 KP1=	86	TAN1=	.0000	1.0000	.0000
KP2=	29	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	87	30			
LINE NO.= 117 KP1=	87	TAN1=	-1.0000	.0002	.0000
KP2=	30	TAN2=	1.0000	-.0002	.0000

LINE CONNECTS KEYPOINTS	31	88			
LINE NO.= 118 KP1=	31	TAN1=	1.0000	.0000	.0000
KP2=	88	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	89	87			
LINE NO.= 119 KP1=	89	TAN1=	-1.0000	.0000	.0000
KP2=	87	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	88	90			
LINE NO.= 120 KP1=	88	TAN1=	1.0000	.0000	.0000
KP2=	90	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	91	89			
LINE NO.= 121 KP1=	91	TAN1=	.0000	-1.0000	.0000
KP2=	89	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	90	92			
LINE NO.= 122 KP1=	90	TAN1=	.0000	1.0000	.0000
KP2=	92	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	33	91			
LINE NO.= 123 KP1=	33	TAN1=	.0000	-1.0000	.0000
KP2=	91	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	92	32			
LINE NO.= 124 KP1=	92	TAN1=	.0000	1.0000	.0000
KP2=	32	TAN2=	.0000	-1.0000	.0000

Guide thickness lines

LINE CONNECTS KEYPOINTS	69	70			
LINE NO.= 125 KP1=	69	TAN1=	-1.0000	.0000	.0000
KP2=	70	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	71	72			
LINE NO.= 126 KP1=	71	TAN1=	-.7071	-.7071	.0000
KP2=	72	TAN2=	.7071	.7071	.0000

LINE CONNECTS KEYPOINTS	73	74			
LINE NO.= 127 KP1=	73	TAN1=	.0000	-1.0000	.0000
KP2=	74	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	75	76			
LINE NO.= 128 KP1=	75	TAN1=	-1.0000	.0000	.0000
KP2=	76	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		77	78			
LINE NO.=	129	KP1=	77	TAN1=	-.7071	-.7071 .0000
		KP2=	78	TAN2=	.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		79	80			
LINE NO.=	130	KP1=	79	TAN1=	.0000	-1.0000 .0000
		KP2=	80	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		82	81			
LINE NO.=	131	KP1=	82	TAN1=	.0000	-1.0000 .0000
		KP2=	81	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		84	83			
LINE NO.=	132	KP1=	84	TAN1=	.7071	-.7071 .0000
		KP2=	83	TAN2=	-.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		86	85			
LINE NO.=	133	KP1=	86	TAN1=	1.0000	.0000 .0000
		KP2=	85	TAN2=	-1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		88	87			
LINE NO.=	134	KP1=	88	TAN1=	.0000	-1.0000 .0000
		KP2=	87	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		90	89			
LINE NO.=	135	KP1=	90	TAN1=	.7071	-.7071 .0000
		KP2=	89	TAN2=	-.7071	.7071 .0000
LINE CONNECTS KEYPOINTS		92	91			
LINE NO.=	136	KP1=	92	TAN1=	1.0000	.0000 .0000
		KP2=	91	TAN2=	-1.0000	.0000 .0000

Guide steel

DEFINE AREA BY LIST OF LINES
 LINE LIST = 93 125 94 15
 (TRAVERSED IN SAME DIRECTION AS LINE 93)
 AREA NUMBER = 27

DEFINE AREA BY LIST OF LINES
 LINE LIST = 95 126 96 125
 (TRAVERSED IN SAME DIRECTION AS LINE 95)
 AREA NUMBER = 28

DEFINE AREA BY LIST OF LINES
 LINE LIST = 97 127 98 126
 (TRAVERSED IN SAME DIRECTION AS LINE 97)
 AREA NUMBER = 29

DEFINE AREA BY LIST OF LINES
 LINE LIST = 99 17 100 127
 (TRAVERSED IN SAME DIRECTION AS LINE 99)
 AREA NUMBER = 30

DEFINE AREA BY LIST OF LINES
 LINE LIST = 101 128 102 18
 (TRAVERSED IN SAME DIRECTION AS LINE 101)
 AREA NUMBER = 31

DEFINE AREA BY LIST OF LINES
 LINE LIST = 103 129 104 128
 (TRAVERSED IN SAME DIRECTION AS LINE 103)
 AREA NUMBER = 32

DEFINE AREA BY LIST OF LINES

LINE LIST = 105 130 106 129
(TRAVERSED IN SAME DIRECTION AS LINE 105)

AREA NUMBER = 33

DEFINE AREA BY LIST OF LINES

LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)

AREA NUMBER = 34

DEFINE AREA BY LIST OF LINES

LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)

AREA NUMBER = 35

DEFINE AREA BY LIST OF LINES

LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)

AREA NUMBER = 36

DEFINE AREA BY LIST OF LINES

LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)

AREA NUMBER = 37

DEFINE AREA BY LIST OF LINES

LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)

AREA NUMBER = 38

DEFINE AREA BY LIST OF LINES

LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)

AREA NUMBER = 39

DEFINE AREA BY LIST OF LINES

LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)

AREA NUMBER = 40

DEFINE AREA BY LIST OF LINES

LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)

AREA NUMBER = 41

DEFINE AREA BY LIST OF LINES

LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)

AREA NUMBER = 42

Guide gaps

DEFINE AREA BY LIST OF LINES

LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)

AREA NUMBER = 43

DEFINE AREA BY LIST OF LINES

LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)

AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 94 X,Y,Z= .100000E-01 .170000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 95 X,Y,Z= .170000E-01 .170000E-01 .000000E+00 IN CSYS= 0

KEYPOINT	96	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	97	X,Y,Z=	.135000E-01	.135000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	98	X,Y,Z=	.135000E-01	.166500	.000000E+00	IN CSYS= 0
KEYPOINT	99	X,Y,Z=	.166500	.166500	.000000E+00	IN CSYS= 0
KEYPOINT	100	X,Y,Z=	.166500	.135000E-01	.000000E+00	IN CSYS= 0

LINE CONNECTS KEYPOINTS	93	97
LINE NO.= 141	KP1= 93	TAN1= -.7071
	KP2= 97	TAN2= .7071
		.0000
		.0000

LINE CONNECTS KEYPOINTS	94	98
LINE NO.= 142	KP1= 94	TAN1= -.7071
	KP2= 98	TAN2= .7071
		.0000
		.0000

LINE CONNECTS KEYPOINTS	96	100
LINE NO.= 143	KP1= 96	TAN1= .7071
	KP2= 100	TAN2= -.7071
		.0000
		.0000

LINE CONNECTS KEYPOINTS	95	99
LINE NO.= 144	KP1= 95	TAN1= .7071
	KP2= 99	TAN2= -.7071
		.0000
		.0000

LINE CONNECTS KEYPOINTS	96	93
LINE NO.= 145	KP1= 96	TAN1= 1.0000
	KP2= 93	TAN2= -1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	100	97
LINE NO.= 146	KP1= 100	TAN1= 1.0000
	KP2= 97	TAN2= -1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	98	99
LINE NO.= 147	KP1= 98	TAN1= -1.0000
	KP2= 99	TAN2= 1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	94	95
LINE NO.= 148	KP1= 94	TAN1= -1.0000
	KP2= 95	TAN2= 1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	93	94
LINE NO.= 149	KP1= 93	TAN1= .0000
	KP2= 94	TAN2= -1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	97	98
LINE NO.= 150	KP1= 97	TAN1= .0000
	KP2= 98	TAN2= -1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	99	100
LINE NO.= 151	KP1= 99	TAN1= .0000
	KP2= 100	TAN2= 1.0000
		.0000
		.0000

LINE CONNECTS KEYPOINTS	95	96
LINE NO.= 152	KP1= 95	TAN1= .0000
	KP2= 96	TAN2= 1.0000
		.0000
		.0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES

LINE LIST = 152 144 151 143
(TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES

LINE LIST = 148 142 147 144
(TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES

LINE LIST = 150 146 151 147
(TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55

Set element shapes and sizes for tubes
8x8 mesh in fuel with 2
divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
first fuel, then stainless tubes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
MAXIMUM NODE NUMBER = 81
MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
 MAXIMUM NODE NUMBER = 145
 MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
 (A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290
 MAXIMUM ELEMENT NUMBER = 256
 (A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= . 0

MAXIMUM NODE NUMBER = 435
 MAXIMUM ELEMENT NUMBER = 384
 (A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580
 MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725
 MAXIMUM ELEMENT NUMBER = 640
 (A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870
 MAXIMUM ELEMENT NUMBER = 768
 (A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015
 MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160
 MAXIMUM ELEMENT NUMBER = 1024
 (A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305
 MAXIMUM ELEMENT NUMBER = 1152
 (A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
 MAXIMUM ELEMENT NUMBER = 1280
 (A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
 MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
 MAXIMUM ELEMENT NUMBER = 1536

(A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
 MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
 MAXIMUM ELEMENT NUMBER = 1792

(A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
 MAXIMUM ELEMENT NUMBER = 1920

(A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 56 TO 60 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
 MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
 MAXIMUM ELEMENT NUMBER = 2176

(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
MAXIMUM ELEMENT NUMBER = 2432

(A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
MAXIMUM ELEMENT NUMBER = 2560

(A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 66 TO 70 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.260 TIME= 05:16:48
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.300 TIME= 05:16:48
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.570 TIME= 05:16:48
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.610 TIME= 05:16:49
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS 5 TO 26 IN STEPS OF 1

NUMBER OF AREAS MESHD = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	

NODE	875	USED	FOR	NODES	3741
NODE	874	USED	FOR	NODES	3742
NODE	873	USED	FOR	NODES	3743
NODE	1195	USED	FOR	NODES	1381
NODE	1050	USED	FOR	NODES	1236
NODE	801	USED	FOR	NODES	905
NODE	107	USED	FOR	NODES	3565
NODE	1091	USED	FOR	NODES	3550
NODE	132	USED	FOR	NODES	615
NODE	1340	USED	FOR	NODES	1526
NODE	656	USED	FOR	NODES	760
NODE	1194	USED	FOR	NODES	1382
NODE	802	USED	FOR	NODES	904
NODE	1049	USED	FOR	NODES	1237
NODE	106	USED	FOR	NODES	3566
NODE	133	USED	FOR	NODES	614
NODE	1092	USED	FOR	NODES	3551
NODE	1339	USED	FOR	NODES	1527
NODE	657	USED	FOR	NODES	759
NODE	1048	USED	FOR	NODES	1238
NODE	134	USED	FOR	NODES	613
NODE	803	USED	FOR	NODES	903
NODE	105	USED	FOR	NODES	3567
NODE	1093	USED	FOR	NODES	3552
NODE	1193	USED	FOR	NODES	1383
NODE	658	USED	FOR	NODES	758
NODE	1338	USED	FOR	NODES	1528
NODE	104	USED	FOR	NODES	3568
NODE	1192	USED	FOR	NODES	1384
NODE	804	USED	FOR	NODES	902
NODE	135	USED	FOR	NODES	612
NODE	1047	USED	FOR	NODES	1239
NODE	1094	USED	FOR	NODES	3553
NODE	1337	USED	FOR	NODES	1529
NODE	659	USED	FOR	NODES	757
NODE	660	USED	FOR	NODES	756
NODE	1191	USED	FOR	NODES	1385
NODE	103	USED	FOR	NODES	3569
NODE	805	USED	FOR	NODES	901
NODE	1095	USED	FOR	NODES	3554
NODE	136	USED	FOR	NODES	611
NODE	1336	USED	FOR	NODES	1530
NODE	1046	USED	FOR	NODES	1240
NODE	661	USED	FOR	NODES	755
NODE	1096	USED	FOR	NODES	3555
NODE	1190	USED	FOR	NODES	1386
NODE	102	USED	FOR	NODES	3570
NODE	806	USED	FOR	NODES	900
NODE	137	USED	FOR	NODES	610
NODE	1335	USED	FOR	NODES	1531
NODE	1045	USED	FOR	NODES	1241
NODE	662	USED	FOR	NODES	754
NODE	1097	USED	FOR	NODES	3556
NODE	138	USED	FOR	NODES	609
NODE	1044	USED	FOR	NODES	1242
NODE	1189	USED	FOR	NODES	1387
NODE	807	USED	FOR	NODES	899
NODE	101	USED	FOR	NODES	3571
NODE	1334	USED	FOR	NODES	1532
NODE	780	USED	FOR	NODES	1747
NODE	120	USED	FOR	NODES	151
NODE	119	USED	FOR	NODES	152
NODE	118	USED	FOR	NODES	153
NODE	117	USED	FOR	NODES	154
NODE	923	USED	FOR	NODES	3210
NODE	1503	USED	FOR	NODES	3499
NODE	1504	USED	FOR	NODES	3498
NODE	777	USED	FOR	NODES	898
NODE	1188	USED	FOR	NODES	1357
NODE	1358	USED	FOR	NODES	2184

1742 3203
2031 2177

NODE	1359	USED	FOR	NODES	2183		
NODE	1360	USED	FOR	NODES	2182		
NODE	1361	USED	FOR	NODES	2181		
NODE	1362	USED	FOR	NODES	2180		
NODE	1363	USED	FOR	NODES	2179		
NODE	1364	USED	FOR	NODES	2178		
NODE	778	USED	FOR	NODES	1749		
NODE	779	USED	FOR	NODES	1748		
NODE	1505	USED	FOR	NODES	3497		
NODE	1506	USED	FOR	NODES	3496		
NODE	1043	USED	FOR	NODES	1212	1886	2032
NODE	1213	USED	FOR	NODES	2039		
NODE	781	USED	FOR	NODES	1746		
NODE	782	USED	FOR	NODES	1745		
NODE	783	USED	FOR	NODES	1744		
NODE	784	USED	FOR	NODES	1743		
NODE	1214	USED	FOR	NODES	2038		
NODE	1215	USED	FOR	NODES	2037		
NODE	1507	USED	FOR	NODES	3495		
NODE	1508	USED	FOR	NODES	3494		
NODE	1509	USED	FOR	NODES	3493		
NODE	1216	USED	FOR	NODES	2036		
NODE	1217	USED	FOR	NODES	2035		
NODE	1218	USED	FOR	NODES	2034		
NODE	635	USED	FOR	NODES	1602		
NODE	1219	USED	FOR	NODES	2033		
NODE	1074	USED	FOR	NODES	1888		
NODE	636	USED	FOR	NODES	1601		
NODE	637	USED	FOR	NODES	1600		
NODE	929	USED	FOR	NODES	3204		
NODE	638	USED	FOR	NODES	1599		
NODE	100	USED	FOR	NODES	146	3564	
NODE	639	USED	FOR	NODES	1598		
NODE	928	USED	FOR	NODES	3205		
NODE	1333	USED	FOR	NODES	1502	2176	3468
NODE	1478	USED	FOR	NODES	3492		
NODE	1067	USED	FOR	NODES	1887	3548	
NODE	116	USED	FOR	NODES	147	608	1596
NODE	922	USED	FOR	NODES	3191		
NODE	924	USED	FOR	NODES	3209		
NODE	925	USED	FOR	NODES	3208		
NODE	926	USED	FOR	NODES	3207		
NODE	927	USED	FOR	NODES	3206		
NODE	121	USED	FOR	NODES	150		
NODE	122	USED	FOR	NODES	149		
NODE	123	USED	FOR	NODES	148		
NODE	632	USED	FOR	NODES	753	1597	1741
NODE	1073	USED	FOR	NODES	1889		
NODE	1072	USED	FOR	NODES	1890		
NODE	1071	USED	FOR	NODES	1891		
NODE	1070	USED	FOR	NODES	1892		
NODE	1069	USED	FOR	NODES	1893		
NODE	1068	USED	FOR	NODES	1894		
NODE	634	USED	FOR	NODES	1603		
NODE	633	USED	FOR	NODES	1604		
NODE	1961	USED	FOR	NODES	3590		
NODE	1920	USED	FOR	NODES	2106		
NODE	1671	USED	FOR	NODES	1775		
NODE	180	USED	FOR	NODES	3605		
NODE	2210	USED	FOR	NODES	3469		
NODE	1816	USED	FOR	NODES	3234		
NODE	2065	USED	FOR	NODES	2251		
NODE	221	USED	FOR	NODES	1630		
NODE	1962	USED	FOR	NODES	3591		
NODE	179	USED	FOR	NODES	3606		
NODE	1919	USED	FOR	NODES	2107		
NODE	2209	USED	FOR	NODES	3470		
NODE	2064	USED	FOR	NODES	2252		
NODE	1672	USED	FOR	NODES	1776		
NODE	222	USED	FOR	NODES	1629		

NODE	1817	USED FOR NODES	3233		
NODE	1673	USED FOR NODES	1773		
NODE	178	USED FOR NODES	3607		
NODE	223	USED FOR NODES	1628		
NODE	1963	USED FOR NODES	3592		
NODE	1818	USED FOR NODES	3232		
NODE	1918	USED FOR NODES	2108		
NODE	2208	USED FOR NODES	3471		
NODE	2063	USED FOR NODES	2253		
NODE	1917	USED FOR NODES	2109		
NODE	177	USED FOR NODES	3608		
NODE	2207	USED FOR NODES	3472		
NODE	224	USED FOR NODES	1627		
NODE	1674	USED FOR NODES	1772		
NODE	1964	USED FOR NODES	3593		
NODE	1819	USED FOR NODES	3231		
NODE	2062	USED FOR NODES	2254		
NODE	1916	USED FOR NODES	2110		
NODE	176	USED FOR NODES	3609		
NODE	2206	USED FOR NODES	3473		
NODE	2061	USED FOR NODES	2255		
NODE	225	USED FOR NODES	1626		
NODE	1965	USED FOR NODES	3594		
NODE	1675	USED FOR NODES	1771		
NODE	1820	USED FOR NODES	3230		
NODE	1966	USED FOR NODES	3595		
NODE	175	USED FOR NODES	3610		
NODE	1821	USED FOR NODES	3229		
NODE	2205	USED FOR NODES	3474		
NODE	1915	USED FOR NODES	2111		
NODE	226	USED FOR NODES	1625		
NODE	1676	USED FOR NODES	1770		
NODE	2060	USED FOR NODES	2256		
NODE	1822	USED FOR NODES	3228		
NODE	174	USED FOR NODES	3611		
NODE	1967	USED FOR NODES	3596		
NODE	2204	USED FOR NODES	3475		
NODE	1914	USED FOR NODES	2112		
NODE	227	USED FOR NODES	1624		
NODE	2059	USED FOR NODES	2257		
NODE	1677	USED FOR NODES	1769		
NODE	199	USED FOR NODES	298		
NODE	198	USED FOR NODES	299		
NODE	1792	USED FOR NODES	2467	3227	
NODE	1793	USED FOR NODES	2474		
NODE	1939	USED FOR NODES	2618		
NODE	1938	USED FOR NODES	2619		
NODE	1794	USED FOR NODES	2473		
NODE	1913	USED FOR NODES	2082	2611	2757
NODE	1795	USED FOR NODES	2472		
NODE	1796	USED FOR NODES	2471		
NODE	1797	USED FOR NODES	2470		
NODE	1798	USED FOR NODES	2469		
NODE	1799	USED FOR NODES	2468		
NODE	2203	USED FOR NODES	2901	3442	
NODE	2058	USED FOR NODES	2227	2756	2902
NODE	2234	USED FOR NODES	2903		
NODE	173	USED FOR NODES	291	3604	
NODE	2083	USED FOR NODES	2764		
NODE	2233	USED FOR NODES	2904		
NODE	2232	USED FOR NODES	2905		
NODE	2231	USED FOR NODES	2906		
NODE	2230	USED FOR NODES	2907		
NODE	2229	USED FOR NODES	2908		
NODE	2084	USED FOR NODES	2763		
NODE	1937	USED FOR NODES	2612	3588	
NODE	2228	USED FOR NODES	2909		
NODE	1940	USED FOR NODES	2617		
NODE	1941	USED FOR NODES	2616		
NODE	1942	USED FOR NODES	2615		

NODE 2085	USED FOR NODES	2762		
NODE 1943	USED FOR NODES	2614		
NODE 2086	USED FOR NODES	2761		
NODE 1944	USED FOR NODES	2613		
NODE 2087	USED FOR NODES	2760		
NODE 197	USED FOR NODES	292	1623	2321
NODE 2088	USED FOR NODES	2759		
NODE 200	USED FOR NODES	297		
NODE 201	USED FOR NODES	296		
NODE 202	USED FOR NODES	295		
NODE 203	USED FOR NODES	294		
NODE 1647	USED FOR NODES	1768	2322	2466
NODE 1648	USED FOR NODES	2329		
NODE 1649	USED FOR NODES	2328		
NODE 204	USED FOR NODES	293		
NODE 1654	USED FOR NODES	2323		
NODE 1653	USED FOR NODES	2324		
NODE 1652	USED FOR NODES	2325		
NODE 1651	USED FOR NODES	2326		
NODE 2089	USED FOR NODES	2758		
NODE 1650	USED FOR NODES	2327		
NODE 325	USED FOR NODES	3645		
NODE 2686	USED FOR NODES	3630		
NODE 2790	USED FOR NODES	2976		
NODE 2541	USED FOR NODES	3258		
NODE 366	USED FOR NODES	2355		
NODE 2396	USED FOR NODES	2500		
NODE 2935	USED FOR NODES	3443		
NODE 2645	USED FOR NODES	2831		
NODE 2789	USED FOR NODES	2977		
NODE 324	USED FOR NODES	3646		
NODE 2542	USED FOR NODES	3257		
NODE 367	USED FOR NODES	2354		
NODE 2644	USED FOR NODES	2832		
NODE 2397	USED FOR NODES	2499		
NODE 2934	USED FOR NODES	3444		
NODE 2687	USED FOR NODES	3631		
NODE 323	USED FOR NODES	3647		
NODE 2398	USED FOR NODES	2498		
NODE 2643	USED FOR NODES	2833		
NODE 2688	USED FOR NODES	3632		
NODE 2788	USED FOR NODES	2978		
NODE 2543	USED FOR NODES	3256		
NODE 368	USED FOR NODES	2353		
NODE 2933	USED FOR NODES	3445		
NODE 2642	USED FOR NODES	2834		
NODE 322	USED FOR NODES	3648		
NODE 2787	USED FOR NODES	2979		
NODE 2399	USED FOR NODES	2497		
NODE 2544	USED FOR NODES	3255		
NODE 369	USED FOR NODES	2352		
NODE 2932	USED FOR NODES	3446		
NODE 2689	USED FOR NODES	3633		
NODE 2641	USED FOR NODES	2835		
NODE 321	USED FOR NODES	3649		
NODE 2786	USED FOR NODES	2980		
NODE 2400	USED FOR NODES	2496		
NODE 2931	USED FOR NODES	3447		
NODE 2545	USED FOR NODES	3254		
NODE 370	USED FOR NODES	2351		
NODE 2690	USED FOR NODES	3634		
NODE 320	USED FOR NODES	3650		
NODE 2785	USED FOR NODES	2981		
NODE 2401	USED FOR NODES	2495		
NODE 2640	USED FOR NODES	2836		
NODE 2546	USED FOR NODES	3253		
NODE 371	USED FOR NODES	2350		
NODE 2930	USED FOR NODES	3448		
NODE 2691	USED FOR NODES	3635		
NODE 319	USED FOR NODES	3651		

NODE	2692	USED FOR NODES	3636		
NODE	372	USED FOR NODES	2349		
NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		

NODE 3077 USED FOR NODES 3374
 NODE 514 USED FOR NODES 3329
 NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.250 TIME= 05:16:52
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 15.970 TIME= 05:16:53
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 15.980 TIME= 05:16:53
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38	USED FOR KEYPOINT(S)	150	
KEYPOINT	40	USED FOR KEYPOINT(S)	93	
KEYPOINT	41	USED FOR KEYPOINT(S)	155	198
KEYPOINT	43	USED FOR KEYPOINT(S)	96	101
KEYPOINT	44	USED FOR KEYPOINT(S)	203	238
KEYPOINT	46	USED FOR KEYPOINT(S)	105	109
KEYPOINT	47	USED FOR KEYPOINT(S)	243	262
KEYPOINT	49	USED FOR KEYPOINT(S)	113	117
KEYPOINT	50	USED FOR KEYPOINT(S)	267	
KEYPOINT	52	USED FOR KEYPOINT(S)	121	
KEYPOINT	54	USED FOR KEYPOINT(S)	142	
KEYPOINT	56	USED FOR KEYPOINT(S)	134	141
KEYPOINT	58	USED FOR KEYPOINT(S)	126	133
KEYPOINT	60	USED FOR KEYPOINT(S)	94	125
KEYPOINT	62	USED FOR KEYPOINT(S)	149	158
KEYPOINT	64	USED FOR KEYPOINT(S)	157	166
KEYPOINT	66	USED FOR KEYPOINT(S)	165	174
KEYPOINT	68	USED FOR KEYPOINT(S)	173	
KEYPOINT	69	USED FOR KEYPOINT(S)	147	
KEYPOINT	71	USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73	USED FOR KEYPOINT(S)	195	230
KEYPOINT	75	USED FOR KEYPOINT(S)	227	233
KEYPOINT	77	USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79	USED FOR KEYPOINT(S)	123	
KEYPOINT	81	USED FOR KEYPOINT(S)	265	
KEYPOINT	83	USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85	USED FOR KEYPOINT(S)	249	259
KEYPOINT	87	USED FOR KEYPOINT(S)	217	253
KEYPOINT	89	USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91	USED FOR KEYPOINT(S)	177	
KEYPOINT	95	USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107	USED FOR KEYPOINT(S)	110	185 221

KEYPOINT	131 USED FOR KEYPOINT(S)	137	182	189
KEYPOINT	153 USED FOR KEYPOINT(S)	163	197	206
KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254

LINE	58 USED FOR LINE(S)	235
LINE	60 USED FOR LINE(S)	145
LINE	61 USED FOR LINE(S)	307
LINE	63 USED FOR LINE(S)	157
LINE	64 USED FOR LINE(S)	367
LINE	66 USED FOR LINE(S)	169
LINE	67 USED FOR LINE(S)	403
LINE	69 USED FOR LINE(S)	181
LINE	76 USED FOR LINE(S)	213
LINE	78 USED FOR LINE(S)	201
LINE	80 USED FOR LINE(S)	189
LINE	82 USED FOR LINE(S)	149
LINE	84 USED FOR LINE(S)	225
LINE	86 USED FOR LINE(S)	237
LINE	88 USED FOR LINE(S)	249
LINE	90 USED FOR LINE(S)	261
LINE	95 USED FOR LINE(S)	220
LINE	97 USED FOR LINE(S)	295
LINE	103 USED FOR LINE(S)	340
LINE	105 USED FOR LINE(S)	187
LINE	111 USED FOR LINE(S)	397
LINE	113 USED FOR LINE(S)	376
LINE	119 USED FOR LINE(S)	325
LINE	121 USED FOR LINE(S)	268
LINE	137 USED FOR LINE(S)	223

*** WARNING *** CP= 16.420 TIME= 05:16:53
 Due to merge, line 137 is now meshed.
 LINE 138 USED FOR LINE(S) 184

*** WARNING *** CP= 16.430 TIME= 05:16:53
 Due to merge, line 138 is now meshed.
 LINE 139 USED FOR LINE(S) 400

*** WARNING *** CP= 16.430 TIME= 05:16:53
 Due to merge, line 139 is now meshed.
 LINE 140 USED FOR LINE(S) 265

*** WARNING *** CP= 16.430 TIME= 05:16:53
 Due to merge, line 140 is now meshed.

LINE	148 USED FOR LINE(S)	193
LINE	152 USED FOR LINE(S)	153
LINE	160 USED FOR LINE(S)	165
LINE	163 USED FOR LINE(S)	277
LINE	172 USED FOR LINE(S)	177
LINE	175 USED FOR LINE(S)	337
LINE	196 USED FOR LINE(S)	273
LINE	199 USED FOR LINE(S)	205
LINE	208 USED FOR LINE(S)	285
LINE	211 USED FOR LINE(S)	217
LINE	229 USED FOR LINE(S)	247
LINE	232 USED FOR LINE(S)	297
LINE	241 USED FOR LINE(S)	259
LINE	244 USED FOR LINE(S)	309
LINE	253 USED FOR LINE(S)	271
LINE	256 USED FOR LINE(S)	321
LINE	280 USED FOR LINE(S)	333
LINE	283 USED FOR LINE(S)	289
LINE	292 USED FOR LINE(S)	345
LINE	301 USED FOR LINE(S)	319
LINE	304 USED FOR LINE(S)	357
LINE	313 USED FOR LINE(S)	331
LINE	316 USED FOR LINE(S)	369
LINE	328 USED FOR LINE(S)	381

LINE 343 USED FOR LINE(S) 349
 LINE 361 USED FOR LINE(S) 379
 LINE 364 USED FOR LINE(S) 393
 LINE 373 USED FOR LINE(S) 391

Create mesh in UCF inner shell
 (L's 105,108 ????)

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 22 STEP 1

10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 32 STEP 1

10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING *** CP= 17.460 TIME= 05:16:54
 Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE *** CP= 17.460 TIME= 05:16:54
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3327	3328	3329	3330	3331	3332	3333	3334	3335	3354
3355	3356	3357	3358	3359	3360	3361	3362	3363	3364
3365	3366	3367	3368	3402	3403	3404	3417	3418	3419
3453	3454	3455	3456	3457	3458	3459	3460	3461	3462
3463	3464	3465	3466	3467	3486	3487	3488	3489	3490
3491	3492	3493	3494						

*** WARNING *** CP= 18.260 TIME= 05:16:55
 Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE ***

CP= 18.270 TIME= 05:16:55

Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2

MAXIMUM NODE NUMBER = 4375

MAXIMUM ELEMENT NUMBER = 3680

Delete concatenated lines

(L's freed up 105,108 ????)

LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 3

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2

MAXIMUM NODE NUMBER = 4738

MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE ***

CP= 21.710 TIME= 05:16:59

Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING ***

CP= 21.750 TIME= 05:16:59

Keypoints 30 and 257 cannot be merged because:

- (1) One or both of them belong to lines.
- (2) The distance between them (3.535443718E-05) exceeds the tolerance (1.6E-06).

*** WARNING ***

CP= 21.760 TIME= 05:16:59

Keypoints 20 and 235 cannot be merged because:

- (1) One or both of them belong to lines.
- (2) The distance between them (3.535443718E-05) exceeds the

tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:

PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50 IN STEPS OF	1
** AREA	43 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	44 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **
** AREA	45 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	46 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 26.920 TIME= 05:17:04
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 26.970 TIME= 05:17:04
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 26.970 TIME= 05:17:04
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES	14 TO	16 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4596	

GENERATE NODES AND ELEMENTS

ON LINES	19 TO	21 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4620	

GENERATE NODES AND ELEMENTS

ON LINES	24 TO	26 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	

MAXIMUM ELEMENT NUMBER = 4644

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1

MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.350

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model
View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=
44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:17:10 JUN 17, 1995 CP= 32.320
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM
260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD
NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING *** CP= 32.540 TIME= 05:17:10
No space node defined. An enclosed system need not have a space node.
For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

***** ROUTINE COMPLETED. ***** CP= 43.490

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:17:21 JUN 17, 1995 CP= 43.490
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES

*** NOTE *** CP= 43.540 TIME= 05:17:21
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.540 TIME= 05:17:21
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.550 TIME= 05:17:21
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.560 TIME= 05:17:21
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.560 TIME= 05:17:21
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.570 TIME= 05:17:21
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.570 TIME= 05:17:21
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.580 TIME= 05:17:21
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.580 TIME= 05:17:21
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.580 TIME= 05:17:21
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.590 TIME= 05:17:21
Nodes cannot be cleared from line 74 because area 17 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.590 TIME= 05:17:21
Nodes cannot be cleared from line 92 because area 26 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.590 TIME= 05:17:21
Nodes cannot be cleared from line 93 because area 27 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.600 TIME= 05:17:21
Nodes cannot be cleared from line 94 because area 27 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.600 TIME= 05:17:21
Nodes cannot be cleared from line 96 because area 28 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.600 TIME= 05:17:21
Nodes cannot be cleared from line 98 because area 29 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.610 TIME= 05:17:21
Nodes cannot be cleared from line 100 because area 30 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.610 TIME= 05:17:21
Nodes cannot be cleared from line 102 because area 31 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.610 TIME= 05:17:21
Nodes cannot be cleared from line 104 because area 32 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.620 TIME= 05:17:21
Nodes cannot be cleared from line 106 because area 33 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.620 TIME= 05:17:21
Nodes cannot be cleared from line 107 because area 34 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.620 TIME= 05:17:21
Nodes cannot be cleared from line 108 because area 34 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.630 TIME= 05:17:21
Nodes cannot be cleared from line 109 because area 35 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.630 TIME= 05:17:21
Nodes cannot be cleared from line 110 because area 35 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.630 TIME= 05:17:21
Nodes cannot be cleared from line 112 because area 36 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.640 TIME= 05:17:21
Nodes cannot be cleared from line 114 because area 37 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.640 TIME= 05:17:21
Nodes cannot be cleared from line 116 because area 38 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.650 TIME= 05:17:21
Nodes cannot be cleared from line 118 because area 39 is meshed. Only elements are deleted.

elements are deleted.

*** NOTE *** CP= 43.650 TIME= 05:17:21
Nodes cannot be cleared from line 120 because area 40 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.650 TIME= 05:17:21
Nodes cannot be cleared from line 122 because area 41 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.660 TIME= 05:17:21
Nodes cannot be cleared from line 123 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.660 TIME= 05:17:21
Nodes cannot be cleared from line 124 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.660 TIME= 05:17:21
Nodes cannot be cleared from line 137 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.670 TIME= 05:17:21
Nodes cannot be cleared from line 138 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.670 TIME= 05:17:21
Nodes cannot be cleared from line 139 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.680 TIME= 05:17:21
Nodes cannot be cleared from line 140 because area 50 is meshed. Only
elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 43.690

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 43.700 TIME= 05:17:21
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO= 273.150

SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1377204 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .10000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 44.950 TIME= 05:17:22

All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.

1
***** ANSYS-- ENGINEERING ANALYSIS SYSTEM: REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:17:22 JUN 17, 1995 CP= 44.950
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM.TEMP
 ANALYSIS TYPE.TRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO.273.15
 NEWTON-RAPHSON OPTION.PROGRAM CHOSEN

*** NOTE *** CP= 45.880 TIME= 05:17:23
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 46.280 TIME= 05:17:24
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER.1
 TIME AT END OF THE LOAD STEP.10000E-05
 AUTOMATIC TIME STEPPING.ON
 INITIAL NUMBER OF SUBSTEPS.0
 MAXIMUM NUMBER OF SUBSTEPS.0
 MINIMUM NUMBER OF SUBSTEPS.1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS.25
 STEP CHANGE BOUNDARY CONDITIONS.NO
 TRANSIENT (INERTIA) EFFECTS.OFF
 TERMINATE ANALYSIS IF NOT CONVERGED.YES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLS.NO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4958.0

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .36780	IXX = 928.4	IXX = 928.4
YC = .91840E-11	IYY = 928.4	IYY = 257.7
ZC = .00000E+00	IZZ = 1857.	IZZ = 1186.
	IXY = -.3220E-12	IXY = .1675E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4957.99

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 63.210 TIME= 05:17:42
 Coefficient ratio exceeds 1.0e8. Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	11.300	.002
18	1	MATRIX50	.080	.080

Time at end of element matrix formulation CP= 63.21.

HT FLOW CONVERGENCE VALUE= 7299. CRITERION= 7.299

Estimated number of active DOF= 4513.

Maximum wavefront= 311.

Time at end of matrix triangularization CP= 81.49.

Equation solver maximum pivot= 835.577491 at node 3669 TEMP.

Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 238.5

HT FLOW CONVERGENCE VALUE= 109.6 CRITERION= .3746

EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -48.59

HT FLOW CONVERGENCE VALUE= 10.28 CRITERION= .3681

EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 5.143

HT FLOW CONVERGENCE VALUE= .6529 CRITERION= .3644

EQUIL ITER 4 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3724

HT FLOW CONVERGENCE VALUE= .3342E-01 CRITERION= .3644 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	6.460	.001
18	1	MATRIX50	.110	.110

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.880	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4

*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS

ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 4513

R.M.S. WAVEFRONT SIZE = 152.5

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096

2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44b.emat

2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44b.esav

5.250 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44b.tri

.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44b.dsub

2.484 MB WRITTEN ON RESULTS FILE: ucf44b.rth

Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=

IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)

RELATED TO SELECTED LINE SET

121 NODES (OF 4634 DEFINED) SELECTED FROM

2 SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.929 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.988 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 68.992 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 209.040 TIME= 05:20:12
This load step will be a static (steady-state) step.

*** NOTE *** CP= 209.450 TIME= 05:20:13
The step data was checked and warning messages were found.

Please review output or errors file (ucf44b.err) for these warning messages.

*** NOTE *** CP= 209.450 TIME= 05:20:13
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:20:13 JUN 17, 1995 CP= 209.450
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 0
MAXIMUM NUMBER OF SUBSTEPS 0
MINIMUM NUMBER OF SUBSTEPS 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS OFF
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1201E+05 CRITERION= 12.02
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 43.08
HT FLOW CONVERGENCE VALUE= 34.83 CRITERION= .3701
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.32
HT FLOW CONVERGENCE VALUE= 3.225 CRITERION= .3599
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.439
HT FLOW CONVERGENCE VALUE= .1897 CRITERION= .3590 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3

*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7

*** TIME = .200000E-05 TIME INC = .100000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS

FOR AUTOMATIC TIME STEPPING:

USE 40 SUBSTEPS AS A MAXIMUM

USE 5 SUBSTEPS AS A MINIMUM

USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP

AS THE STARTING TIME STEP SIZE.

Begin Transient

Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=

IN RANGE 14 TO 14 STEP 1

22 AREAS (OF= 160 DEFINED) SELECTED BY ASEL COMMAND

SELECTED ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.929 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.988 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 68.992 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 318.020 TIME= 05:22:03
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 05:22:03 JUN 17, 1995 CP= 318.020
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 3
TIME AT END OF THE LOAD STEP. 31.558
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGED YES (EXIT)
CONVERGENCE CONTROLS. USE DEFAULTS
PRINT OUTPUT CONTROLS NO PRINTOUT
DATABASE OUTPUT CONTROLS. ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1897 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2010E-03
 HT FLOW CONVERGENCE VALUE= .5830E-05 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 1 COMPLETED. CUM ITER = 8
 *** TIME = .788942 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1914 OSCILLATION LIMIT = .1510
 *** AUTO STEP TIME: NEXT TIME INC = .78894 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3586 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2618E-03
 HT FLOW CONVERGENCE VALUE= .8638E-05 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
 *** TIME = 1.57788 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1120 OSCILLATION LIMIT = .8839E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3374 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3924E-03
 HT FLOW CONVERGENCE VALUE= .1658E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
 *** TIME = 3.94470 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .3808E-01 OSCILLATION LIMIT = .9013E-01
 *** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3178 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2634E-03
 HT FLOW CONVERGENCE VALUE= .3577E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
 *** TIME = 10.2562 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .6223E-02 OSCILLATION LIMIT = .3928E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3088 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1669E-03
 HT FLOW CONVERGENCE VALUE= .3231E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
 *** TIME = 16.5677 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .2120E-02 OSCILLATION LIMIT = .1338E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3050 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1667E-03
 HT FLOW CONVERGENCE VALUE= .3140E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
 *** TIME = 22.8793 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1909E-02 OSCILLATION LIMIT = .1205E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3016 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1664E-03
 HT FLOW CONVERGENCE VALUE= .3075E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
 *** TIME = 29.1908 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1804E-02 OSCILLATION LIMIT = .1139E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2984 CRITERION= .3590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6231E-04
 HT FLOW CONVERGENCE VALUE= .1141E-04 CRITERION= .3590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
 *** TIME = 31.5576 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .1757E-02 OSCILLATION LIMIT = .4158E-02

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:29:31 JUN 17, 1995 CP= 759.290
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 200.7 CRITERION= .4113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7551
 HT FLOW CONVERGENCE VALUE= .4472 CRITERION= .3569
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8455E-01
 HT FLOW CONVERGENCE VALUE= .2993E-01 CRITERION= .3569 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6999E-05 OSCILLATION LIMIT = .5522
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 201.7 CRITERION= .4098
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7590
 HT FLOW CONVERGENCE VALUE= .5225 CRITERION= .3580
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1157
 HT FLOW CONVERGENCE VALUE= .3269E-01 CRITERION= .3580 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8162E-06 OSCILLATION LIMIT = .6439E-01
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 602.4 CRITERION= .7008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.265
 HT FLOW CONVERGENCE VALUE= 1.556 CRITERION= .3567
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4367
 HT FLOW CONVERGENCE VALUE= .1267 CRITERION= .3565 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1050E-05 OSCILLATION LIMIT = .2484
 *** AUTO TIME STEP: NEXT TIME INC = .47634E+06 INCREASED (FACTOR = 2.0126)

HT FLOW CONVERGENCE VALUE= 1214. CRITERION= 1.265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.559
 HT FLOW CONVERGENCE VALUE= 3.426 CRITERION= .3575
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9896
 HT FLOW CONVERGENCE VALUE= .2855 CRITERION= .3570 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 870844. TIME INC = 476343.
 *** RESPONSE EIGENVALUE = .9291E-06 OSCILLATION LIMIT = .4426
 *** AUTO STEP TIME: NEXT TIME INC = .47634E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1215. CRITERION= 1.266
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.559
 HT FLOW CONVERGENCE VALUE= 3.220 CRITERION= .3556
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9864
 HT FLOW CONVERGENCE VALUE= .2860 CRITERION= .3552 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .134719E+07 TIME INC = 476343.
 *** RESPONSE EIGENVALUE = .9192E-06 OSCILLATION LIMIT = .4379
 *** AUTO STEP TIME: NEXT TIME INC = .47634E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1217. CRITERION= 1.267
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.559

HT FLOW CONVERGENCE VALUE= 3.339 CRITERION= .3561
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9914
 HT FLOW CONVERGENCE VALUE= .2899 CRITERION= .3556 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .182353E+07 TIME INC = 476343.
 *** RESPONSE EIGENVALUE = .8742E-06 OSCILLATION LIMIT = .4164
 *** AUTO STEP TIME: NEXT TIME INC = .47634E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1218. CRITERION= 1.269
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.559
 HT FLOW CONVERGENCE VALUE= 3.522 CRITERION= .3542
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9758
 HT FLOW CONVERGENCE VALUE= .2880 CRITERION= .3538 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .229987E+07 TIME INC = 476343.
 *** RESPONSE EIGENVALUE = .8962E-06 OSCILLATION LIMIT = .4269
 *** AUTO STEP TIME: NEXT TIME INC = .47634E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1220. CRITERION= 1.270
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.559
 HT FLOW CONVERGENCE VALUE= 3.539 CRITERION= .3546
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9737
 HT FLOW CONVERGENCE VALUE= .2947 CRITERION= .3542 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .277621E+07 TIME INC = 476343.
 *** RESPONSE EIGENVALUE = .8530E-06 OSCILLATION LIMIT = .4063
 *** AUTO TIME STEP: NEXT TIME INC = .37958E+06 DECREASED (FACTOR = .7969)

HT FLOW CONVERGENCE VALUE= 972.6 CRITERION= 1.035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.633
 HT FLOW CONVERGENCE VALUE= 2.960 CRITERION= .3525
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7467
 HT FLOW CONVERGENCE VALUE= .2266 CRITERION= .3525 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .315579E+07 TIME INC = 379577.
 *** RESPONSE EIGENVALUE = .8556E-06 OSCILLATION LIMIT = .3248

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:41:49 JUN 17, 1995 CP= 1487.400
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 201.8 CRITERION= .4059
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.073
 HT FLOW CONVERGENCE VALUE= .7040 CRITERION= .3553
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1977
 HT FLOW CONVERGENCE VALUE= .5198E-01 CRITERION= .3553 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 35
 *** TIME = .353537E+07 TIME INC = 379577.
 *** RESPONSE EIGENVALUE = .1076E-05 OSCILLATION LIMIT = .4083
 *** AUTO STEP TIME: NEXT TIME INC = .37958E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 200.0 CRITERION= .4079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6976
 HT FLOW CONVERGENCE VALUE= .5272 CRITERION= .3522
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1109
 HT FLOW CONVERGENCE VALUE= .4207E-01 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 37
 *** TIME = .391495E+07 TIME INC = 379577.

*** RESPONSE EIGENVALUE = .6393E-05 OSCILLATION LIMIT = 2.426
 *** AUTO TIME STEP: NEXT TIME INC = .12653E+06 DECREASED (FACTOR = .3333)

HT FLOW CONVERGENCE VALUE= 67.92 CRITERION= .3586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4016
 HT FLOW CONVERGENCE VALUE= .2524 CRITERION= .3546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 38
 *** TIME = .404147E+07 TIME INC = 126526.
 *** RESPONSE EIGENVALUE = .5046E-05 OSCILLATION LIMIT = .6384
 *** AUTO STEP TIME: NEXT TIME INC = .12653E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.16 CRITERION= .3608
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2325
 HT FLOW CONVERGENCE VALUE= .1667 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 39
 *** TIME = .416800E+07 TIME INC = 126526.
 *** RESPONSE EIGENVALUE = .1179E-04 OSCILLATION LIMIT = 1.492
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .6235)

HT FLOW CONVERGENCE VALUE= 42.72 CRITERION= .3549
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1672
 HT FLOW CONVERGENCE VALUE= .1335 CRITERION= .3544 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 40
 *** TIME = .424689E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1330E-04 OSCILLATION LIMIT = 1.049
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.99 CRITERION= .3568
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1050 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 41
 *** TIME = .432579E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1740E-04 OSCILLATION LIMIT = 1.373
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.69 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1649
 HT FLOW CONVERGENCE VALUE= .1316 CRITERION= .3542 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 42
 *** TIME = .440468E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1172E-04 OSCILLATION LIMIT = .9244
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.01 CRITERION= .3566
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1081 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 8 COMPLETED. CUM ITER = 43
 *** TIME = .448357E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1398E-04 OSCILLATION LIMIT = 1.103
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.67 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1633
 HT FLOW CONVERGENCE VALUE= .1294 CRITERION= .3540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 9 COMPLETED. CUM ITER = 44
 *** TIME = .456247E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = .8426
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.03 CRITERION= .3564
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1093 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 10 COMPLETED. CUM ITER = 45
 *** TIME = .464136E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1218E-04 OSCILLATION LIMIT = .9612
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.64 CRITERION= .3547
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1622
 HT FLOW CONVERGENCE VALUE= .1282 CRITERION= .3539 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 11 COMPLETED. CUM ITER = 46
 *** TIME = .472026E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9686E-05 OSCILLATION LIMIT = .7642
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.05 CRITERION= .3563
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1105 CRITERION= .3521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 12 COMPLETED. CUM ITER = 47
 *** TIME = .479915E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1076E-04 OSCILLATION LIMIT = .8488
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.62 CRITERION= .3546
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1612
 HT FLOW CONVERGENCE VALUE= .1294 CRITERION= .3537 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 13 COMPLETED. CUM ITER = 48
 *** TIME = .487804E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8828E-05 OSCILLATION LIMIT = .6965
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.07 CRITERION= .3561
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .3520 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 14 COMPLETED. CUM ITER = 49
 *** TIME = .495694E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9591E-05 OSCILLATION LIMIT = .7567
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.60 CRITERION= .3546
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1603
 HT FLOW CONVERGENCE VALUE= .1283 CRITERION= .3536 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 15 COMPLETED. CUM ITER = 50
 *** TIME = .503583E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8080E-05 OSCILLATION LIMIT = .6374
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.09 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1133 CRITERION= .3520 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 16 COMPLETED. CUM ITER = 51
 *** TIME = .511473E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8607E-05 OSCILLATION LIMIT = .6791
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.58 CRITERION= .3545
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1595
 HT FLOW CONVERGENCE VALUE= .1276 CRITERION= .3534 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 5 SUBSTEP 17 COMPLETED. CUM ITER = 52
 *** TIME = .519362E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7414E-05 OSCILLATION LIMIT = .5850
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.11 CRITERION= .3559
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450

HT FLOW CONVERGENCE VALUE= .1138 CRITERION= .3519 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 18 COMPLETED. CUM ITER = 53
 *** TIME = .527251E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7766E-05 OSCILLATION LIMIT = .6127
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.56 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1271 CRITERION= .3533 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 19 COMPLETED. CUM ITER = 54
 *** TIME = .535141E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6819E-05 OSCILLATION LIMIT = .5380
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.13 CRITERION= .3557
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1143 CRITERION= .3518 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 20 COMPLETED. CUM ITER = 55
 *** TIME = .543030E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7037E-05 OSCILLATION LIMIT = .5552
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.54 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1580
 HT FLOW CONVERGENCE VALUE= .1266 CRITERION= .3532 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 21 COMPLETED. CUM ITER = 56
 *** TIME = .550920E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6287E-05 OSCILLATION LIMIT = .4960
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.14 CRITERION= .3556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1147 CRITERION= .3517 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 22 COMPLETED. CUM ITER = 57
 *** TIME = .558809E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6402E-05 OSCILLATION LIMIT = .5050
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.53 CRITERION= .3543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1573
 HT FLOW CONVERGENCE VALUE= .1261 CRITERION= .3530 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 23 COMPLETED. CUM ITER = 58
 *** TIME = .566698E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5809E-05 OSCILLATION LIMIT = .4583
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.16 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1150 CRITERION= .3517 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 59
 *** TIME = .574588E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5845E-05 OSCILLATION LIMIT = .4611
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.51 CRITERION= .3542
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1566
 HT FLOW CONVERGENCE VALUE= .1256 CRITERION= .3529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 60
 *** TIME = .582477E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5380E-05 OSCILLATION LIMIT = .4245
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.17 CRITERION= .3553
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1153 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 61
 *** TIME = .590367E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5355E-05 OSCILLATION LIMIT = .4225
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.49 CRITERION= .3541
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560
 HT FLOW CONVERGENCE VALUE= .1262 CRITERION= .3527 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 62
 *** TIME = .598256E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4995E-05 OSCILLATION LIMIT = .3941
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.19 CRITERION= .3552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1193 CRITERION= .3515 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 63
 *** TIME = .606145E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4924E-05 OSCILLATION LIMIT = .3885
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.48 CRITERION= .3540
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1554
 HT FLOW CONVERGENCE VALUE= .1290 CRITERION= .3526 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 64
 *** TIME = .614035E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4655E-05 OSCILLATION LIMIT = .3672
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.20 CRITERION= .3550
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1450
 HT FLOW CONVERGENCE VALUE= .1195 CRITERION= .3514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 65
 *** TIME = .621924E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4546E-05 OSCILLATION LIMIT = .3587
 *** AUTO STEP TIME: NEXT TIME INC = 46155. DECREASED (FACTOR = .5850)

HT FLOW CONVERGENCE VALUE= 25.15 CRITERION= .3523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9467E-01
 HT FLOW CONVERGENCE VALUE= .7616E-01 CRITERION= .3525 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 66
 *** TIME = .626540E+07 TIME INC = 46155.0
 *** RESPONSE EIGENVALUE = .1081E-04 OSCILLATION LIMIT = .4991
 *** AUTO STEP TIME: NEXT TIME INC = 46155. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.91 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8483E-01
 HT FLOW CONVERGENCE VALUE= .6727E-01 CRITERION= .3514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 32 COMPLETED. CUM ITER = 67
 *** TIME = .631155E+07 TIME INC = 46155.0
 *** RESPONSE EIGENVALUE = .1096E-04 OSCILLATION LIMIT = .5060

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:12:14 JUN 17, 1995 CP= 3287.410
 FOR SUPPORT CALL ROBERT. BAHMEY. PHONE: (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old; 49 GMD/MTU SNF

HT FLOW CONVERGENCE VALUE= 26.98 CRITERION= .3524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1011
 HT FLOW CONVERGENCE VALUE= .8689E-01 CRITERION= .3525 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 68
 *** TIME = .639045E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7190E-05 OSCILLATION LIMIT = .5672
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.70 CRITERION= .3535
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7131E-01 CRITERION= .3514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 69
 *** TIME = .646934E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1084E-04 OSCILLATION LIMIT = .8554
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.96 CRITERION= .3524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1001
 HT FLOW CONVERGENCE VALUE= .8196E-01 CRITERION= .3524 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 3 COMPLETED. CUM ITER = 70
 *** TIME = .654823E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8476E-05 OSCILLATION LIMIT = .6687
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.71 CRITERION= .3534
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7272E-01 CRITERION= .3513 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 4 COMPLETED. CUM ITER = 71
 *** TIME = .662713E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9095E-05 OSCILLATION LIMIT = .7176
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.95 CRITERION= .3523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9956E-01
 HT FLOW CONVERGENCE VALUE= .8225E-01 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 5 COMPLETED. CUM ITER = 72
 *** TIME = .670602E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7899E-05 OSCILLATION LIMIT = .6232
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.72 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7419E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 6 COMPLETED. CUM ITER = 73
 *** TIME = .678492E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8342E-05 OSCILLATION LIMIT = .6581
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.94 CRITERION= .3523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9907E-01
 HT FLOW CONVERGENCE VALUE= .8247E-01 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 7 COMPLETED. CUM ITER = 74
 *** TIME = .686381E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7355E-05 OSCILLATION LIMIT = .5803
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.73 CRITERION= .3531
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7450E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 8 COMPLETED. CUM ITER = 75

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*** TIME = .694270E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7667E-05    OSCILLATION LIMIT = .6049
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.92    CRITERION= .3522
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9861E-01
HT FLOW CONVERGENCE VALUE= .8212E-01    CRITERION= .3521    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 9 COMPLETED.    CUM ITER = 76
*** TIME = .702160E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6862E-05    OSCILLATION LIMIT = .5414
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.74    CRITERION= .3530
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7474E-01    CRITERION= .3511    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 10 COMPLETED.    CUM ITER = 77
*** TIME = .710049E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7072E-05    OSCILLATION LIMIT = .5579
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.91    CRITERION= .3521
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9818E-01
HT FLOW CONVERGENCE VALUE= .8176E-01    CRITERION= .3520    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 11 COMPLETED.    CUM ITER = 78
*** TIME = .717939E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6412E-05    OSCILLATION LIMIT = .5059
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.75    CRITERION= .3529
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7498E-01    CRITERION= .3510    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 12 COMPLETED.    CUM ITER = 79
*** TIME = .725828E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6545E-05    OSCILLATION LIMIT = .5164
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.90    CRITERION= .3520
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9778E-01
HT FLOW CONVERGENCE VALUE= .8154E-01    CRITERION= .3518    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 13 COMPLETED.    CUM ITER = 80
*** TIME = .733717E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6003E-05    OSCILLATION LIMIT = .4736
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.77    CRITERION= .3528
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7519E-01    CRITERION= .3509    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 14 COMPLETED.    CUM ITER = 81
*** TIME = .741607E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6077E-05    OSCILLATION LIMIT = .4794
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.89    CRITERION= .3520
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9740E-01
HT FLOW CONVERGENCE VALUE= .8137E-01    CRITERION= .3517    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 15 COMPLETED.    CUM ITER = 82
*** TIME = .749496E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5632E-05    OSCILLATION LIMIT = .4444
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.78    CRITERION= .3527
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7542E-01    CRITERION= .3509    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 83
*** TIME = .757386E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5661E-05 OSCILLATION LIMIT = .4466
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.88 CRITERION= .3519
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9704E-01
HT FLOW CONVERGENCE VALUE= .8113E-01 CRITERION= .3516 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 84
*** TIME = .765275E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5296E-05 OSCILLATION LIMIT = .4178
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.79 CRITERION= .3526
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7555E-01 CRITERION= .3508 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 85
*** TIME = .773164E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5287E-05 OSCILLATION LIMIT = .4171
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.87 CRITERION= .3518
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9669E-01
HT FLOW CONVERGENCE VALUE= .8131E-01 CRITERION= .3515 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 86
*** TIME = .781054E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4990E-05 OSCILLATION LIMIT = .3936
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.79 CRITERION= .3525
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7667E-01 CRITERION= .3507 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 87
*** TIME = .788943E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4954E-05 OSCILLATION LIMIT = .3908
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.86 CRITERION= .3517
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9637E-01
HT FLOW CONVERGENCE VALUE= .8180E-01 CRITERION= .3514 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 88
*** TIME = .796833E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4713E-05 OSCILLATION LIMIT = .3719
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.80 CRITERION= .3524
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
HT FLOW CONVERGENCE VALUE= .7679E-01 CRITERION= .3506 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 89
*** TIME = .804722E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4655E-05 OSCILLATION LIMIT = .3673
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.85 CRITERION= .3516
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9606E-01
HT FLOW CONVERGENCE VALUE= .8159E-01 CRITERION= .3513 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 90
*** TIME = .812611E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4460E-05 OSCILLATION LIMIT = .3519
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.81 CRITERION= .3523

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7691E-01 CRITERION= .3506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 91
 *** TIME = .820501E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4385E-05 OSCILLATION LIMIT = .3460
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.84 CRITERION= .3516
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9577E-01
 HT FLOW CONVERGENCE VALUE= .8134E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 25 COMPLETED. CUM ITER = 92
 *** TIME = .828390E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4229E-05 OSCILLATION LIMIT = .3337
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.82 CRITERION= .3522
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7704E-01 CRITERION= .3505 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 26 COMPLETED. CUM ITER = 93
 *** TIME = .836280E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4143E-05 OSCILLATION LIMIT = .3268
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.83 CRITERION= .3515
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9550E-01
 HT FLOW CONVERGENCE VALUE= .8126E-01 CRITERION= .3511 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 27 COMPLETED. CUM ITER = 94
 *** TIME = .844169E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4018E-05 OSCILLATION LIMIT = .3170
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.83 CRITERION= .3521
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7717E-01 CRITERION= .3504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 28 COMPLETED. CUM ITER = 95
 *** TIME = .852058E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3924E-05 OSCILLATION LIMIT = .3096
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.83 CRITERION= .3514
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9524E-01
 HT FLOW CONVERGENCE VALUE= .8111E-01 CRITERION= .3510 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 29 COMPLETED. CUM ITER = 96
 *** TIME = .859948E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3828E-05 OSCILLATION LIMIT = .3020
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.84 CRITERION= .3520
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9116E-01
 HT FLOW CONVERGENCE VALUE= .7723E-01 CRITERION= .3503 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 30 COMPLETED. CUM ITER = 97
 *** TIME = .867837E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3728E-05 OSCILLATION LIMIT = .2941
 *** AUTO TIME STEP: NEXT TIME INC = .13413E+06 INCREASED (FACTOR = 1.7001)

HT FLOW CONVERGENCE VALUE= 45.20 CRITERION= .3532
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1588
 HT FLOW CONVERGENCE VALUE= .1379 CRITERION= .3508 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 31 COMPLETED. CUM ITER = 98
 *** TIME = .881250E+07 TIME INC = .134131E+06
 *** RESPONSE EIGENVALUE = .1812E-05 OSCILLATION LIMIT = .2430
 *** AUTO TIME STEP: NEXT TIME INC = .27595E+06 INCREASED (FACTOR = 2.0574)

HT FLOW CONVERGENCE VALUE= 91.44 CRITERION= .3626
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3189
 HT FLOW CONVERGENCE VALUE= .2808 CRITERION= .3501 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 32 COMPLETED. CUM ITER = 99
 *** TIME = .908846E+07 TIME INC = 275955.
 *** RESPONSE EIGENVALUE = .9744E-06 OSCILLATION LIMIT = .2689
 *** AUTO TIME STEP: NEXT TIME INC = .37885E+06 INCREASED (FACTOR = 1.3729)

HT FLOW CONVERGENCE VALUE= 126.7 CRITERION= .3722
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4420
 HT FLOW CONVERGENCE VALUE= .3851 CRITERION= .3505
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7940E-01
 HT FLOW CONVERGENCE VALUE= .2775E-01 CRITERION= .3505 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 6 SUBSTEP 33 COMPLETED. CUM ITER = 101
 *** TIME = .946731E+07 TIME INC = 378855.
 *** RESPONSE EIGENVALUE = .3013E-05 OSCILLATION LIMIT = 1.142

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:43:06 JUN 17, 1995 CP= 5117.360
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 94.72 CRITERION= .3631
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3308
 HT FLOW CONVERGENCE VALUE= .2929 CRITERION= .3497 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 102
 *** TIME = .984617E+07 TIME INC = 378855.
 *** RESPONSE EIGENVALUE = .7691E-06 OSCILLATION LIMIT = .2914
 *** AUTO STEP TIME: NEXT TIME INC = .37885E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 95.66 CRITERION= .3625
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3345
 HT FLOW CONVERGENCE VALUE= .2979 CRITERION= .3501 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 103
 *** TIME = .102250E+08 TIME INC = 378855.
 *** RESPONSE EIGENVALUE = .1780E-05 OSCILLATION LIMIT = .6745
 *** AUTO STEP TIME: NEXT TIME INC = .37885E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 94.72 CRITERION= .3627
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3308
 HT FLOW CONVERGENCE VALUE= .2918 CRITERION= .3493 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 104
 *** TIME = .106039E+08 TIME INC = 378855.
 *** RESPONSE EIGENVALUE = .2443E-05 OSCILLATION LIMIT = .9255
 *** AUTO TIME STEP: NEXT TIME INC = .20467E+06 DECREASED (FACTOR = .5402)

HT FLOW CONVERGENCE VALUE= 51.92 CRITERION= .3531
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1821
 HT FLOW CONVERGENCE VALUE= .1595 CRITERION= .3498 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 4 COMPLETED. CUM ITER = 105
 *** TIME = .108085E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .3381E-05 OSCILLATION LIMIT = .6920
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.98 CRITERION= .3535
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1787
 HT FLOW CONVERGENCE VALUE= .1563 CRITERION= .3491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 5 COMPLETED. CUM ITER = 106
 *** TIME = .110132E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .3092E-05 OSCILLATION LIMIT = .6328
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .3529
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1819
 HT FLOW CONVERGENCE VALUE= .1652 CRITERION= .3495 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 6 COMPLETED. CUM ITER = 107
 *** TIME = .112179E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .1937E-05 OSCILLATION LIMIT = .3965
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.99 CRITERION= .3532
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1787
 HT FLOW CONVERGENCE VALUE= .1598 CRITERION= .3488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 7 COMPLETED. CUM ITER = 108
 *** TIME = .114226E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2643E-05 OSCILLATION LIMIT = .5410
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .3527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1817
 HT FLOW CONVERGENCE VALUE= .1641 CRITERION= .3493 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 8 COMPLETED. CUM ITER = 109
 *** TIME = .116272E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2200E-05 OSCILLATION LIMIT = .4502
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.99 CRITERION= .3530
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1787
 HT FLOW CONVERGENCE VALUE= .1603 CRITERION= .3486 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 9 COMPLETED. CUM ITER = 110
 *** TIME = .118319E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2420E-05 OSCILLATION LIMIT = .4952
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .3524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1816
 HT FLOW CONVERGENCE VALUE= .1636 CRITERION= .3491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 10 COMPLETED. CUM ITER = 111
 *** TIME = .120366E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2278E-05 OSCILLATION LIMIT = .4661
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.99 CRITERION= .3528
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1787
 HT FLOW CONVERGENCE VALUE= .1604 CRITERION= .3484 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 11 COMPLETED. CUM ITER = 112
 *** TIME = .122412E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2342E-05 OSCILLATION LIMIT = .4793
 *** AUTO STEP TIME: NEXT TIME INC = .20467E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.90 CRITERION= .3522
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1815
 HT FLOW CONVERGENCE VALUE= .1634 CRITERION= .3488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 113
 *** TIME = .124459E+08 TIME INC = 204670.
 *** RESPONSE EIGENVALUE = .2290E-05 OSCILLATION LIMIT = .4688
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 DECREASED (FACTOR = .8656)

HT FLOW CONVERGENCE VALUE= 44.09 CRITERION= .3516
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1547

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HT FLOW CONVERGENCE VALUE= .1381      CRITERION= .3482      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 114
*** TIME = .126231E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .2686E-05 OSCILLATION LIMIT = .4759

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***** ANSYS SOLVE COMMAND *****
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:55:11 JUN 17, 1995 CP= 5831.860
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 36.55      CRITERION= .3501
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1284
HT FLOW CONVERGENCE VALUE= .1147      CRITERION= .3487      <<< CONVERGED.
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 115
*** TIME = .128002E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .3085E-05 OSCILLATION LIMIT = .5466
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 35.63      CRITERION= .3505
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
HT FLOW CONVERGENCE VALUE= .1099      CRITERION= .3480      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 116
*** TIME = .129774E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .3647E-05 OSCILLATION LIMIT = .6461
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 36.55      CRITERION= .3499
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1282
HT FLOW CONVERGENCE VALUE= .1157      CRITERION= .3485      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 117
*** TIME = .131546E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .2863E-05 OSCILLATION LIMIT = .5073
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 35.63      CRITERION= .3503
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
HT FLOW CONVERGENCE VALUE= .1127      CRITERION= .3478      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 118
*** TIME = .133317E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .3281E-05 OSCILLATION LIMIT = .5813
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 36.55      CRITERION= .3497
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1281
HT FLOW CONVERGENCE VALUE= .1165      CRITERION= .3483      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 119
*** TIME = .135089E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .3008E-05 OSCILLATION LIMIT = .5329
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 35.63      CRITERION= .3501
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
HT FLOW CONVERGENCE VALUE= .1128      CRITERION= .3477      <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 120
*** TIME = .136861E+08 TIME INC = 177166.
*** RESPONSE EIGENVALUE = .3145E-05 OSCILLATION LIMIT = .5571
*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 36.54 CRITERION= .3495
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1280
 HT FLOW CONVERGENCE VALUE= .1162 CRITERION= .3481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 121
 *** TIME = .138632E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .3023E-05 OSCILLATION LIMIT = .5356
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.63 CRITERION= .3499
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .3475 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 122
 *** TIME = .140404E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .3086E-05 OSCILLATION LIMIT = .5468
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.54 CRITERION= .3494
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1279
 HT FLOW CONVERGENCE VALUE= .1161 CRITERION= .3479 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 123
 *** TIME = .142176E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .3006E-05 OSCILLATION LIMIT = .5326
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .3497
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .3473 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 124
 *** TIME = .143947E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .3047E-05 OSCILLATION LIMIT = .5399
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.54 CRITERION= .3492
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1279
 HT FLOW CONVERGENCE VALUE= .1159 CRITERION= .3477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 125
 *** TIME = .145719E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2983E-05 OSCILLATION LIMIT = .5286
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .3496
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
 HT FLOW CONVERGENCE VALUE= .1138 CRITERION= .3471 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 126
 *** TIME = .147491E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .3014E-05 OSCILLATION LIMIT = .5341
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.54 CRITERION= .3490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1278
 HT FLOW CONVERGENCE VALUE= .1170 CRITERION= .3475 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 127
 *** TIME = .149262E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2958E-05 OSCILLATION LIMIT = .5241
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .3494
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3469 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 128
 *** TIME = .151034E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2986E-05 OSCILLATION LIMIT = .5289

*** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.53 CRITERION= .3488
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1277
 HT FLOW CONVERGENCE VALUE= .1170 CRITERION= .3473 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 129
 *** TIME = .152806E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2934E-05 OSCILLATION LIMIT = .5198
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .3492
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1253
 HT FLOW CONVERGENCE VALUE= .1140 CRITERION= .3467 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 130
 *** TIME = .154577E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2957E-05 OSCILLATION LIMIT = .5239
 *** AUTO STEP TIME: NEXT TIME INC = .17717E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.53 CRITERION= .3486
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1277
 HT FLOW CONVERGENCE VALUE= .1168 CRITERION= .3471 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 131
 *** TIME = .156349E+08 TIME INC = 177166.
 *** RESPONSE EIGENVALUE = .2910E-05 OSCILLATION LIMIT = .5155
 *** AUTO TIME STEP: NEXT TIME INC = .14394E+06 DECREASED (FACTOR = .8125)

HT FLOW CONVERGENCE VALUE= 28.89 CRITERION= .3484
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1018
 HT FLOW CONVERGENCE VALUE= .9168E-01 CRITERION= .3466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 18 COMPLETED. CUM ITER = 132
 *** TIME = .157788E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .3664E-05 OSCILLATION LIMIT = .5274

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 07:11:51 JUN 17, 1995 CP= 6818.590
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 25.12 CRITERION= .3475
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8821E-01
 HT FLOW CONVERGENCE VALUE= .8002E-01 CRITERION= .3470 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 133
 *** TIME = .159228E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .4065E-05 OSCILLATION LIMIT = .5851
 *** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.23 CRITERION= .3479
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
 HT FLOW CONVERGENCE VALUE= .7621E-01 CRITERION= .3464 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 134
 *** TIME = .160667E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .4652E-05 OSCILLATION LIMIT = .6695
 *** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.12 CRITERION= .3473
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8808E-01
 HT FLOW CONVERGENCE VALUE= .7992E-01 CRITERION= .3469 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 135

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*** TIME = .162106E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3891E-05    OSCILLATION LIMIT = .5601
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.24    CRITERION= .3477
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
    HT FLOW CONVERGENCE VALUE= .7660E-01    CRITERION= .3463    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 136
*** TIME = .163546E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .4274E-05    OSCILLATION LIMIT = .6153
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.11    CRITERION= .3472
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8800E-01
    HT FLOW CONVERGENCE VALUE= .7963E-01    CRITERION= .3467    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 137
*** TIME = .164985E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3976E-05    OSCILLATION LIMIT = .5723
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.24    CRITERION= .3476
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
    HT FLOW CONVERGENCE VALUE= .7669E-01    CRITERION= .3462    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 138
*** TIME = .166425E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .4143E-05    OSCILLATION LIMIT = .5963
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.11    CRITERION= .3471
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8792E-01
    HT FLOW CONVERGENCE VALUE= .7947E-01    CRITERION= .3466    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 139
*** TIME = .167864E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3948E-05    OSCILLATION LIMIT = .5683
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.24    CRITERION= .3474
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
    HT FLOW CONVERGENCE VALUE= .7669E-01    CRITERION= .3460    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 140
*** TIME = .169303E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .4071E-05    OSCILLATION LIMIT = .5860
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.11    CRITERION= .3469
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8786E-01
    HT FLOW CONVERGENCE VALUE= .7934E-01    CRITERION= .3464    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 141
*** TIME = .170743E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3903E-05    OSCILLATION LIMIT = .5617
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.24    CRITERION= .3473
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
    HT FLOW CONVERGENCE VALUE= .7669E-01    CRITERION= .3459    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 142
*** TIME = .172182E+08    TIME INC = 143939.
*** RESPONSE EIGENVALUE = .4012E-05    OSCILLATION LIMIT = .5775
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.11    CRITERION= .3468
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8780E-01
    HT FLOW CONVERGENCE VALUE= .7926E-01    CRITERION= .3463    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 143
*** TIME = .173622E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3857E-05 OSCILLATION LIMIT = .5551
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.25 CRITERION= .3471
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
HT FLOW CONVERGENCE VALUE= .7673E-01 CRITERION= .3457 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 144
*** TIME = .175061E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3958E-05 OSCILLATION LIMIT = .5697
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.10 CRITERION= .3466
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8775E-01
HT FLOW CONVERGENCE VALUE= .7916E-01 CRITERION= .3461 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 145
*** TIME = .176500E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3812E-05 OSCILLATION LIMIT = .5487
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.25 CRITERION= .3470
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
HT FLOW CONVERGENCE VALUE= .7674E-01 CRITERION= .3456 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 146
*** TIME = .177940E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3906E-05 OSCILLATION LIMIT = .5623
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.10 CRITERION= .3465
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8769E-01
HT FLOW CONVERGENCE VALUE= .7908E-01 CRITERION= .3460 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 147
*** TIME = .179379E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3768E-05 OSCILLATION LIMIT = .5424
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.25 CRITERION= .3468
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
HT FLOW CONVERGENCE VALUE= .7675E-01 CRITERION= .3455 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 148
*** TIME = .180819E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3857E-05 OSCILLATION LIMIT = .5552
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.10 CRITERION= .3463
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8764E-01
HT FLOW CONVERGENCE VALUE= .7899E-01 CRITERION= .3458 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 149
*** TIME = .182258E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3727E-05 OSCILLATION LIMIT = .5364
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.26 CRITERION= .3467
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
HT FLOW CONVERGENCE VALUE= .7680E-01 CRITERION= .3453 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 150
*** TIME = .183697E+08 TIME INC = 143939.
*** RESPONSE EIGENVALUE = .3811E-05 OSCILLATION LIMIT = .5486
*** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.09 CRITERION= .3462

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8759E-01
 HT FLOW CONVERGENCE VALUE= .7906E-01 CRITERION= .3457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 151
 *** TIME = .185137E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .3688E-05 OSCILLATION LIMIT = .5308
 *** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.26 CRITERION= .3465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8578E-01
 HT FLOW CONVERGENCE VALUE= .7698E-01 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 152
 *** TIME = .186576E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .3768E-05 OSCILLATION LIMIT = .5424
 *** AUTO STEP TIME: NEXT TIME INC = .14394E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.09 CRITERION= .3461
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8754E-01
 HT FLOW CONVERGENCE VALUE= .7909E-01 CRITERION= .3455 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 153
 *** TIME = .188015E+08 TIME INC = 143939.
 *** RESPONSE EIGENVALUE = .3650E-05 OSCILLATION LIMIT = .5254
 *** AUTO TIME STEP: NEXT TIME INC = .13304E+06 DECREASED (FACTOR = .9243)

HT FLOW CONVERGENCE VALUE= 22.40 CRITERION= .3462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7929E-01
 HT FLOW CONVERGENCE VALUE= .7098E-01 CRITERION= .3450 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 154
 *** TIME = .189346E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4048E-05 OSCILLATION LIMIT = .5385

***** ANSYS SOLVE COMMAND *****

1
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 07:32:11 JUN 17, 1995 CP= 8023.570
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3456
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7107E-01
 HT FLOW CONVERGENCE VALUE= .6393E-01 CRITERION= .3454 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 1 COMPLETED. CUM ITER = 155
 *** TIME = .190676E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4419E-05 OSCILLATION LIMIT = .5879
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.52 CRITERION= .3460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
 HT FLOW CONVERGENCE VALUE= .6110E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 2 COMPLETED. CUM ITER = 156
 *** TIME = .192007E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .5141E-05 OSCILLATION LIMIT = .6839
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3455
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7099E-01
 HT FLOW CONVERGENCE VALUE= .6379E-01 CRITERION= .3453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 3 COMPLETED. CUM ITER = 157
 *** TIME = .193337E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4359E-05 OSCILLATION LIMIT = .5799
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.52 CRITERION= .3458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
 HT FLOW CONVERGENCE VALUE= .6147E-01 CRITERION= .3448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 4 COMPLETED. CUM ITER = 158
 *** TIME = .194668E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4755E-05 OSCILLATION LIMIT = .6326
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7094E-01
 HT FLOW CONVERGENCE VALUE= .6361E-01 CRITERION= .3451 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 5 COMPLETED. CUM ITER = 159
 *** TIME = .195998E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4432E-05 OSCILLATION LIMIT = .5896
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.52 CRITERION= .3457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
 HT FLOW CONVERGENCE VALUE= .6154E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 160
 *** TIME = .197328E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4634E-05 OSCILLATION LIMIT = .6165
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3452
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7088E-01
 HT FLOW CONVERGENCE VALUE= .6353E-01 CRITERION= .3450 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 161
 *** TIME = .198659E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4398E-05 OSCILLATION LIMIT = .5851
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.53 CRITERION= .3455
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
 HT FLOW CONVERGENCE VALUE= .6158E-01 CRITERION= .3445 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 162
 *** TIME = .199989E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4565E-05 OSCILLATION LIMIT = .6073
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7084E-01
 HT FLOW CONVERGENCE VALUE= .6344E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 163
 *** TIME = .201320E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4350E-05 OSCILLATION LIMIT = .5787
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.53 CRITERION= .3454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
 HT FLOW CONVERGENCE VALUE= .6159E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 10 COMPLETED. CUM ITER = 164
 *** TIME = .202650E+08 TIME INC = 133043.
 *** RESPONSE EIGENVALUE = .4505E-05 OSCILLATION LIMIT = .5993
 *** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7079E-01
 HT FLOW CONVERGENCE VALUE= .6338E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 11 COMPLETED. CUM ITER = 165
 *** TIME = .203981E+08 TIME INC = 133043.

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*** RESPONSE EIGENVALUE = .4303E-05  OSCILLATION LIMIT = .5725
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 19.53  CRITERION= .3453
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
  HT FLOW CONVERGENCE VALUE= .6172E-01 CRITERION= .3443  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 12 COMPLETED.  CUM ITER = 166
*** TIME = .205311E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4450E-05  OSCILLATION LIMIT = .5920
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.33  CRITERION= .3449
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7074E-01
  HT FLOW CONVERGENCE VALUE= .6356E-01 CRITERION= .3446  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 13 COMPLETED.  CUM ITER = 167
*** TIME = .206641E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4258E-05  OSCILLATION LIMIT = .5665
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 19.53  CRITERION= .3451
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
  HT FLOW CONVERGENCE VALUE= .6185E-01 CRITERION= .3441  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 14 COMPLETED.  CUM ITER = 168
*** TIME = .207972E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4397E-05  OSCILLATION LIMIT = .5850
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.33  CRITERION= .3447
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7070E-01
  HT FLOW CONVERGENCE VALUE= .6385E-01 CRITERION= .3445  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 15 COMPLETED.  CUM ITER = 169
*** TIME = .209302E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4214E-05  OSCILLATION LIMIT = .5607
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 19.54  CRITERION= .3450
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
  HT FLOW CONVERGENCE VALUE= .6261E-01 CRITERION= .3440  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 16 COMPLETED.  CUM ITER = 170
*** TIME = .210633E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4347E-05  OSCILLATION LIMIT = .5783
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.33  CRITERION= .3446
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7065E-01
  HT FLOW CONVERGENCE VALUE= .6421E-01 CRITERION= .3443  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 17 COMPLETED.  CUM ITER = 171
*** TIME = .211963E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4171E-05  OSCILLATION LIMIT = .5549
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 19.54  CRITERION= .3449
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
  HT FLOW CONVERGENCE VALUE= .6266E-01 CRITERION= .3439  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 18 COMPLETED.  CUM ITER = 172
*** TIME = .213294E+08  TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4298E-05  OSCILLATION LIMIT = .5718
*** AUTO STEP TIME:  NEXT TIME INC = .13304E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.32  CRITERION= .3445
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7061E-01
  HT FLOW CONVERGENCE VALUE= .6415E-01 CRITERION= .3442  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 173
*** TIME = .214624E+08 TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4130E-05 OSCILLATION LIMIT = .5495
*** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.54 CRITERION= .3447
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
HT FLOW CONVERGENCE VALUE= .6267E-01 CRITERION= .3438 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 174
*** TIME = .215954E+08 TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4253E-05 OSCILLATION LIMIT = .5659
*** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3443
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7057E-01
HT FLOW CONVERGENCE VALUE= .6409E-01 CRITERION= .3441 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 175
*** TIME = .217285E+08 TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4092E-05 OSCILLATION LIMIT = .5444
*** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.54 CRITERION= .3446
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6925E-01
HT FLOW CONVERGENCE VALUE= .6267E-01 CRITERION= .3436 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 176
*** TIME = .218615E+08 TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4211E-05 OSCILLATION LIMIT = .5602
*** AUTO STEP TIME: NEXT TIME INC = .13304E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3442
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7053E-01
HT FLOW CONVERGENCE VALUE= .6402E-01 CRITERION= .3439 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 177
*** TIME = .219946E+08 TIME INC = 133043.
*** RESPONSE EIGENVALUE = .4055E-05 OSCILLATION LIMIT = .5395
*** AUTO STEP TIME: NEXT TIME INC = 95777. DECREASED (FACTOR = .7199)

HT FLOW CONVERGENCE VALUE= 13.97 CRITERION= .3442
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4985E-01
HT FLOW CONVERGENCE VALUE= .4455E-01 CRITERION= .3435 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 178
*** TIME = .220904E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5929E-05 OSCILLATION LIMIT = .5679

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 07:54:22 JUN 17, 1995 CP= 9337.350
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 13.21 CRITERION= .3438
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4587E-01
HT FLOW CONVERGENCE VALUE= .4116E-01 CRITERION= .3438 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 179
*** TIME = .221861E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .6007E-05 OSCILLATION LIMIT = .5754
*** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 12.43 CRITERION= .3441
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01

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HT FLOW CONVERGENCE VALUE= .3961E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 180
 *** TIME = .222819E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .6487E-05 OSCILLATION LIMIT = .6213
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.20 CRITERION= .3437
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4581E-01
 HT FLOW CONVERGENCE VALUE= .4112E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 181
 *** TIME = .223777E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5806E-05 OSCILLATION LIMIT = .5561
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.44 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3973E-01 CRITERION= .3433 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 182
 *** TIME = .224735E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .6193E-05 OSCILLATION LIMIT = .5931
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.20 CRITERION= .3436
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4576E-01
 HT FLOW CONVERGENCE VALUE= .4103E-01 CRITERION= .3436 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 183
 *** TIME = .225692E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5759E-05 OSCILLATION LIMIT = .5516
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.44 CRITERION= .3439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3977E-01 CRITERION= .3433 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 184
 *** TIME = .226650E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .6060E-05 OSCILLATION LIMIT = .5804
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.20 CRITERION= .3435
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4572E-01
 HT FLOW CONVERGENCE VALUE= .4097E-01 CRITERION= .3435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 185
 *** TIME = .227608E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5666E-05 OSCILLATION LIMIT = .5427
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.44 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3980E-01 CRITERION= .3432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 186
 *** TIME = .228566E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5948E-05 OSCILLATION LIMIT = .5697
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.19 CRITERION= .3434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4569E-01
 HT FLOW CONVERGENCE VALUE= .4091E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 187
 *** TIME = .229523E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5577E-05 OSCILLATION LIMIT = .5342
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.45 CRITERION= .3437
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3983E-01 CRITERION= .3431 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 188
 *** TIME = .230481E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5843E-05 OSCILLATION LIMIT = .5597
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.19 CRITERION= .3433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4566E-01
 HT FLOW CONVERGENCE VALUE= .4088E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 189
 *** TIME = .231439E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5493E-05 OSCILLATION LIMIT = .5261
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.45 CRITERION= .3436
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3986E-01 CRITERION= .3430 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 190
 *** TIME = .232397E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5746E-05 OSCILLATION LIMIT = .5503
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.19 CRITERION= .3432
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4563E-01
 HT FLOW CONVERGENCE VALUE= .4082E-01 CRITERION= .3433 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 191
 *** TIME = .233355E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5415E-05 OSCILLATION LIMIT = .5186
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.45 CRITERION= .3435
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3988E-01 CRITERION= .3429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 192
 *** TIME = .234312E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5655E-05 OSCILLATION LIMIT = .5416
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.18 CRITERION= .3432
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4561E-01
 HT FLOW CONVERGENCE VALUE= .4078E-01 CRITERION= .3432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 193
 *** TIME = .235270E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5340E-05 OSCILLATION LIMIT = .5115
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.45 CRITERION= .3434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3991E-01 CRITERION= .3428 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 194
 *** TIME = .236228E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5569E-05 OSCILLATION LIMIT = .5334
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.18 CRITERION= .3431
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4558E-01
 HT FLOW CONVERGENCE VALUE= .4074E-01 CRITERION= .3431 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 195
 *** TIME = .237186E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5270E-05 OSCILLATION LIMIT = .5048

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*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 12.46      CRITERION= .3433
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
  HT FLOW CONVERGENCE VALUE= .3993E-01 CRITERION= .3427      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 196
*** TIME = .238143E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5489E-05 OSCILLATION LIMIT = .5258
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.18      CRITERION= .3430
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4556E-01
  HT FLOW CONVERGENCE VALUE= .4070E-01 CRITERION= .3430      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 197
*** TIME = .239101E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5204E-05 OSCILLATION LIMIT = .4984
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 12.46      CRITERION= .3432
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
  HT FLOW CONVERGENCE VALUE= .3994E-01 CRITERION= .3426      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 198
*** TIME = .240059E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5414E-05 OSCILLATION LIMIT = .5186
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.17      CRITERION= .3429
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4554E-01
  HT FLOW CONVERGENCE VALUE= .4066E-01 CRITERION= .3429      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 199
*** TIME = .241017E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5142E-05 OSCILLATION LIMIT = .4925
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 12.46      CRITERION= .3431
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
  HT FLOW CONVERGENCE VALUE= .3996E-01 CRITERION= .3426      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 200
*** TIME = .241975E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5343E-05 OSCILLATION LIMIT = .5118
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.17      CRITERION= .3428
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4551E-01
  HT FLOW CONVERGENCE VALUE= .4062E-01 CRITERION= .3428      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 201
*** TIME = .242932E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5083E-05 OSCILLATION LIMIT = .4868
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 12.47      CRITERION= .3430
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
  HT FLOW CONVERGENCE VALUE= .3998E-01 CRITERION= .3425      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 202
*** TIME = .243890E+08 TIME INC = 95777.5
*** RESPONSE EIGENVALUE = .5277E-05 OSCILLATION LIMIT = .5054
*** AUTO STEP TIME: NEXT TIME INC = 95777.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.17      CRITERION= .3427
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4549E-01
  HT FLOW CONVERGENCE VALUE= .4058E-01 CRITERION= .3427      <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 203

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*** TIME = .244848E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5027E-05 OSCILLATION LIMIT = .4815
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.47 CRITERION= .3429
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .3996E-01 CRITERION= .3424 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 204
 *** TIME = .245806E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5214E-05 OSCILLATION LIMIT = .4994
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.17 CRITERION= .3426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4547E-01
 HT FLOW CONVERGENCE VALUE= .4054E-01 CRITERION= .3426 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 205
 *** TIME = .246763E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .4975E-05 OSCILLATION LIMIT = .4765
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.47 CRITERION= .3428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .4007E-01 CRITERION= .3423 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 206
 *** TIME = .247721E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5155E-05 OSCILLATION LIMIT = .4937
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.16 CRITERION= .3425
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4545E-01
 HT FLOW CONVERGENCE VALUE= .4075E-01 CRITERION= .3425 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 29 COMPLETED. CUM ITER = 207
 *** TIME = .248679E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .4925E-05 OSCILLATION LIMIT = .4717
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.47 CRITERION= .3427
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .4024E-01 CRITERION= .3422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 30 COMPLETED. CUM ITER = 208
 *** TIME = .249637E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5098E-05 OSCILLATION LIMIT = .4883
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.16 CRITERION= .3424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4543E-01
 HT FLOW CONVERGENCE VALUE= .4073E-01 CRITERION= .3424 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 31 COMPLETED. CUM ITER = 209
 *** TIME = .250595E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .4877E-05 OSCILLATION LIMIT = .4671
 *** AUTO STEP TIME: NEXT TIME INC = 95777. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.48 CRITERION= .3426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4454E-01
 HT FLOW CONVERGENCE VALUE= .4032E-01 CRITERION= .3421 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 32 COMPLETED. CUM ITER = 210
 *** TIME = .251552E+08 TIME INC = 95777.5
 *** RESPONSE EIGENVALUE = .5045E-05 OSCILLATION LIMIT = .4832
 *** AUTO STEP TIME: NEXT TIME INC = 90881. DECREASED (FACTOR = .9489)

HT FLOW CONVERGENCE VALUE= 12.51 CRITERION= .3423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4314E-01
 HT FLOW CONVERGENCE VALUE= .3953E-01 CRITERION= .3423 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 33 COMPLETED. CUM ITER = 211
*** TIME = .252461E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5085E-05 OSCILLATION LIMIT = .4622
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 08:24:49 JUN 17, 1995 CP= 11143.130
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 10.69 CRITERION= .3425
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
HT FLOW CONVERGENCE VALUE= .3550E-01 CRITERION= .3420 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 1 COMPLETED. CUM ITER = 212
*** TIME = .253370E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5612E-05 OSCILLATION LIMIT = .5101
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.36 CRITERION= .3422
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3914E-01
HT FLOW CONVERGENCE VALUE= .3545E-01 CRITERION= .3422 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 2 COMPLETED. CUM ITER = 213
*** TIME = .254279E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5936E-05 OSCILLATION LIMIT = .5395
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 10.69 CRITERION= .3424
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
HT FLOW CONVERGENCE VALUE= .3536E-01 CRITERION= .3419 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 3 COMPLETED. CUM ITER = 214
*** TIME = .255188E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5788E-05 OSCILLATION LIMIT = .5261
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
```

```
HT FLOW CONVERGENCE VALUE= 11.36 CRITERION= .3421
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3912E-01
HT FLOW CONVERGENCE VALUE= .3555E-01 CRITERION= .3421 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 4 COMPLETED. CUM ITER = 215
*** TIME = .256096E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5619E-05 OSCILLATION LIMIT = .5106
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
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```
HT FLOW CONVERGENCE VALUE= 10.70 CRITERION= .3423
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
HT FLOW CONVERGENCE VALUE= .3534E-01 CRITERION= .3419 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 216
*** TIME = .257005E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5808E-05 OSCILLATION LIMIT = .5278
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.36 CRITERION= .3420
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3911E-01
HT FLOW CONVERGENCE VALUE= .3554E-01 CRITERION= .3421 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 217
*** TIME = .257914E+08 TIME INC = 90881.4
*** RESPONSE EIGENVALUE = .5554E-05 OSCILLATION LIMIT = .5048
*** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 10.70 CRITERION= .3422

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3534E-01 CRITERION= .3418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 218
 *** TIME = .258823E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5753E-05 OSCILLATION LIMIT = .5229
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.36 CRITERION= .3420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3909E-01
 HT FLOW CONVERGENCE VALUE= .3552E-01 CRITERION= .3420 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 219
 *** TIME = .259732E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5504E-05 OSCILLATION LIMIT = .5002
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.70 CRITERION= .3421
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3534E-01 CRITERION= .3417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 220
 *** TIME = .260640E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5700E-05 OSCILLATION LIMIT = .5180
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.35 CRITERION= .3419
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3908E-01
 HT FLOW CONVERGENCE VALUE= .3552E-01 CRITERION= .3419 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 221
 *** TIME = .261549E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5457E-05 OSCILLATION LIMIT = .4959
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.70 CRITERION= .3421
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3538E-01 CRITERION= .3416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 222
 *** TIME = .262458E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5648E-05 OSCILLATION LIMIT = .5133
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.35 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3906E-01
 HT FLOW CONVERGENCE VALUE= .3551E-01 CRITERION= .3418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 223
 *** TIME = .263367E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5412E-05 OSCILLATION LIMIT = .4919
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.71 CRITERION= .3420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3538E-01 CRITERION= .3415 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 224
 *** TIME = .264276E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5599E-05 OSCILLATION LIMIT = .5088
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.35 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3905E-01
 HT FLOW CONVERGENCE VALUE= .3548E-01 CRITERION= .3417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 225
 *** TIME = .265185E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5370E-05 OSCILLATION LIMIT = .4880
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.71 CRITERION= .3419
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3537E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 226
 *** TIME = .266093E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5551E-05 OSCILLATION LIMIT = .5045
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.35 CRITERION= .3416
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3903E-01
 HT FLOW CONVERGENCE VALUE= .3546E-01 CRITERION= .3416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 227
 *** TIME = .267002E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5330E-05 OSCILLATION LIMIT = .4844
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.71 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3537E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 228
 *** TIME = .267911E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5506E-05 OSCILLATION LIMIT = .5004
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.35 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3902E-01
 HT FLOW CONVERGENCE VALUE= .3544E-01 CRITERION= .3415 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 229
 *** TIME = .268820E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5292E-05 OSCILLATION LIMIT = .4809
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.71 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3538E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 230
 *** TIME = .269729E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5462E-05 OSCILLATION LIMIT = .4964
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.34 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3901E-01
 HT FLOW CONVERGENCE VALUE= .3545E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 231
 *** TIME = .270637E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5255E-05 OSCILLATION LIMIT = .4776
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.72 CRITERION= .3416
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3547E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 21 COMPLETED. CUM ITER = 232
 *** TIME = .271546E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5420E-05 OSCILLATION LIMIT = .4926
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.34 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3900E-01
 HT FLOW CONVERGENCE VALUE= .3549E-01 CRITERION= .3414 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 22 COMPLETED. CUM ITER = 233
 *** TIME = .272455E+08 TIME INC = 90881.4

*** RESPONSE EIGENVALUE = .5219E-05 OSCILLATION LIMIT = .4743
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED
 HT FLOW CONVERGENCE VALUE= 10.72 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3548E-01 CRITERION= .3411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 23 COMPLETED. CUM ITER = 234
 *** TIME = .273364E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5380E-05 OSCILLATION LIMIT = .4889
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.34 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3898E-01
 HT FLOW CONVERGENCE VALUE= .3547E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 24 COMPLETED. CUM ITER = 235
 *** TIME = .274273E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5186E-05 OSCILLATION LIMIT = .4713
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.72 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3556E-01 CRITERION= .3410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 25 COMPLETED. CUM ITER = 236
 *** TIME = .275181E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5341E-05 OSCILLATION LIMIT = .4854
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.34 CRITERION= .3412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3897E-01
 HT FLOW CONVERGENCE VALUE= .3586E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 26 COMPLETED. CUM ITER = 237
 *** TIME = .276090E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5154E-05 OSCILLATION LIMIT = .4684
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.72 CRITERION= .3414
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3589E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 27 COMPLETED. CUM ITER = 238
 *** TIME = .276999E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5304E-05 OSCILLATION LIMIT = .4820
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.34 CRITERION= .3411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3896E-01
 HT FLOW CONVERGENCE VALUE= .3584E-01 CRITERION= .3411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 28 COMPLETED. CUM ITER = 239
 *** TIME = .277908E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5123E-05 OSCILLATION LIMIT = .4655
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.72 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3589E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 29 COMPLETED. CUM ITER = 240
 *** TIME = .278817E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5269E-05 OSCILLATION LIMIT = .4788
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .3410
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3895E-01
 HT FLOW CONVERGENCE VALUE= .3582E-01 CRITERION= .3410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 30 COMPLETED. CUM ITER = 241
 *** TIME = .279726E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5093E-05 OSCILLATION LIMIT = .4628
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3589E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 31 COMPLETED. CUM ITER = 242
 *** TIME = .280634E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5234E-05 OSCILLATION LIMIT = .4757
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.33 CRITERION= .3410
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3894E-01
 HT FLOW CONVERGENCE VALUE= .3581E-01 CRITERION= .3409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 32 COMPLETED. CUM ITER = 243
 *** TIME = .281543E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5064E-05 OSCILLATION LIMIT = .4603
 *** AUTO STEP TIME: NEXT TIME INC = 90881. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3411
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3830E-01
 HT FLOW CONVERGENCE VALUE= .3589E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 33 COMPLETED. CUM ITER = 244
 *** TIME = .282452E+08 TIME INC = 90881.4
 *** RESPONSE EIGENVALUE = .5201E-05 OSCILLATION LIMIT = .4727
 *** AUTO TIME STEP: NEXT TIME INC = 78338. DECREASED (FACTOR = .8620)

HT FLOW CONVERGENCE VALUE= 9.810 CRITERION= .3408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3366E-01
 HT FLOW CONVERGENCE VALUE= .3074E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 34 COMPLETED. CUM ITER = 245
 *** TIME = .283235E+08 TIME INC = 78337.6
 *** RESPONSE EIGENVALUE = .5760E-05 OSCILLATION LIMIT = .4512
 *** AUTO STEP TIME: NEXT TIME INC = 78338. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.211 CRITERION= .3410
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3302E-01
 HT FLOW CONVERGENCE VALUE= .3087E-01 CRITERION= .3406 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 35 COMPLETED. CUM ITER = 246
 *** TIME = .284019E+08 TIME INC = 78337.6
 *** RESPONSE EIGENVALUE = .5833E-05 OSCILLATION LIMIT = .4569
 Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM FROM .31558E+08 TO .28402E+09 BY .31558E+08
 TIME= .31558E+08

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 6169.91289 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11

LOAD LABELS = TEMP
VALUES = 117.39 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10

LOAD LABELS = TEMP
VALUES = 118.50 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9

LOAD LABELS = TEMP
VALUES = 121.02 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 13056.860 TIME= 08:57:09
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 08:57:09 JUN 17, 1995 CP= 13056.860
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
TIME AT END OF THE LOAD STEP.31558E+08
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 9.124 CRITERION= .3407
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3131E-01
HT FLOW CONVERGENCE VALUE= .2868E-01 CRITERION= .3408 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 247
*** TIME = .284808E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5719E-05 OSCILLATION LIMIT = .4512
*** AUTO STEP TIME:: NEXT TIME INC = 78894.0 UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.525 CRITERION= .3409

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2844E-01 CRITERION= .3406 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 248
 *** TIME = .285597E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6634E-05 OSCILLATION LIMIT = .5234
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.121 CRITERION= .3407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3129E-01
 HT FLOW CONVERGENCE VALUE= .2851E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 249
 *** TIME = .286386E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6058E-05 OSCILLATION LIMIT = .4780
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.527 CRITERION= .3408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2853E-01 CRITERION= .3405 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 250
 *** TIME = .287174E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6321E-05 OSCILLATION LIMIT = .4987
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.119 CRITERION= .3406
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3128E-01
 HT FLOW CONVERGENCE VALUE= .2847E-01 CRITERION= .3406 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 251
 *** TIME = .287963E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6059E-05 OSCILLATION LIMIT = .4781
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.529 CRITERION= .3407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2853E-01 CRITERION= .3404 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 252
 *** TIME = .288752E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6262E-05 OSCILLATION LIMIT = .4940
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.117 CRITERION= .3405
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2845E-01 CRITERION= .3406 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 253
 *** TIME = .289541E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6019E-05 OSCILLATION LIMIT = .4748
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.531 CRITERION= .3407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2854E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 8 COMPLETED. CUM ITER = 254
 *** TIME = .290330E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6208E-05 OSCILLATION LIMIT = .4898
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.115 CRITERION= .3405
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3125E-01
 HT FLOW CONVERGENCE VALUE= .2843E-01 CRITERION= .3405 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 9 COMPLETED. CUM ITER = 255
 *** TIME = .291119E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5979E-05 OSCILLATION LIMIT = .4777
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.534 CRITERION= .3406
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2855E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 10 COMPLETED. CUM ITER = 256
 *** TIME = .291908E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6158E-05 OSCILLATION LIMIT = .4858
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.113 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3124E-01
 HT FLOW CONVERGENCE VALUE= .2842E-01 CRITERION= .3404 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 11 COMPLETED. CUM ITER = 257
 *** TIME = .292697E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5940E-05 OSCILLATION LIMIT = .4686
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.536 CRITERION= .3405
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2856E-01 CRITERION= .3402 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 12 COMPLETED. CUM ITER = 258
 *** TIME = .293486E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6110E-05 OSCILLATION LIMIT = .4820
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.111 CRITERION= .3403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3123E-01
 HT FLOW CONVERGENCE VALUE= .2841E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 13 COMPLETED. CUM ITER = 259
 *** TIME = .294275E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5902E-05 OSCILLATION LIMIT = .4657
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.538 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2857E-01 CRITERION= .3401 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 14 COMPLETED. CUM ITER = 260
 *** TIME = .295064E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6064E-05 OSCILLATION LIMIT = .4784
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.109 CRITERION= .3402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3122E-01
 HT FLOW CONVERGENCE VALUE= .2841E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 15 COMPLETED. CUM ITER = 261
 *** TIME = .295853E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5865E-05 OSCILLATION LIMIT = .4627
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.540 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3401 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 262
 *** TIME = .296642E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6021E-05 OSCILLATION LIMIT = .4750
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.107 CRITERION= .3402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3121E-01
 HT FLOW CONVERGENCE VALUE= .2839E-01 CRITERION= .3402 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 263
 *** TIME = .297431E+08 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .5830E-05  OSCILLATION LIMIT = .4599
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 8.542      CRITERION= .3403
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
    HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3400    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 18 COMPLETED.    CUM ITER = 264
*** TIME = .298220E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5979E-05  OSCILLATION LIMIT = .4717
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.105      CRITERION= .3401
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3121E-01
    HT FLOW CONVERGENCE VALUE= .2838E-01 CRITERION= .3401    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 19 COMPLETED.    CUM ITER = 265
*** TIME = .299009E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5795E-05  OSCILLATION LIMIT = .4572
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 8.544      CRITERION= .3402
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
    HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3399    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 20 COMPLETED.    CUM ITER = 266
*** TIME = .299798E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5939E-05  OSCILLATION LIMIT = .4685
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.103      CRITERION= .3400
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3120E-01
    HT FLOW CONVERGENCE VALUE= .2837E-01 CRITERION= .3400    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 21 COMPLETED.    CUM ITER = 267
*** TIME = .300586E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5761E-05  OSCILLATION LIMIT = .4545
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 8.546      CRITERION= .3401
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
    HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3398    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 22 COMPLETED.    CUM ITER = 268
*** TIME = .301375E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5900E-05  OSCILLATION LIMIT = .4655
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.101      CRITERION= .3400
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3119E-01
    HT FLOW CONVERGENCE VALUE= .2837E-01 CRITERION= .3400    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 23 COMPLETED.    CUM ITER = 269
*** TIME = .302164E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5729E-05  OSCILLATION LIMIT = .4519
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 8.548      CRITERION= .3401
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
    HT FLOW CONVERGENCE VALUE= .2859E-01 CRITERION= .3398    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 24 COMPLETED.    CUM ITER = 270
*** TIME = .302953E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5863E-05  OSCILLATION LIMIT = .4625
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.099      CRITERION= .3399
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3118E-01
    HT FLOW CONVERGENCE VALUE= .2837E-01 CRITERION= .3399    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 271
 *** TIME = .303742E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5697E-05 OSCILLATION LIMIT = .4495
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.549 CRITERION= .3400
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2860E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 26 COMPLETED. CUM ITER = 272
 *** TIME = .304531E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5827E-05 OSCILLATION LIMIT = .4597
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.097 CRITERION= .3398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3117E-01
 HT FLOW CONVERGENCE VALUE= .2836E-01 CRITERION= .3398 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 27 COMPLETED. CUM ITER = 273
 *** TIME = .305320E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5666E-05 OSCILLATION LIMIT = .4470
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.551 CRITERION= .3399
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3065E-01
 HT FLOW CONVERGENCE VALUE= .2861E-01 CRITERION= .3396 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 28 COMPLETED. CUM ITER = 274
 *** TIME = .306109E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5791E-05 OSCILLATION LIMIT = .4569
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.095 CRITERION= .3397
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3117E-01
 HT FLOW CONVERGENCE VALUE= .2840E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 29 COMPLETED. CUM ITER = 275
 *** TIME = .306898E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5636E-05 OSCILLATION LIMIT = .4446
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.553 CRITERION= .3399
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3066E-01
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .3396 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 30 COMPLETED. CUM ITER = 276
 *** TIME = .307687E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5757E-05 OSCILLATION LIMIT = .4542
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.093 CRITERION= .3397
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3116E-01
 HT FLOW CONVERGENCE VALUE= .2840E-01 CRITERION= .3397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 31 COMPLETED. CUM ITER = 277
 *** TIME = .308476E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5607E-05 OSCILLATION LIMIT = .4423
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.555 CRITERION= .3398
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3067E-01
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .3395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 13 SUBSTEP 32 COMPLETED. CUM ITER = 278
 *** TIME = .309265E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5724E-05 OSCILLATION LIMIT = .4516
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.091 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3115E-01

HT FLOW CONVERGENCE VALUE= .2840E-01 CRITERION= .3396 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 33 COMPLETED. CUM ITER = 279
 *** TIME = .310054E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5578E-05 OSCILLATION LIMIT = .4401
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.557 CRITERION= .3397
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3067E-01
 HT FLOW CONVERGENCE VALUE= .2868E-01 CRITERION= .3394 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 34 COMPLETED. CUM ITER = 280
 *** TIME = .310843E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5691E-05 OSCILLATION LIMIT = .4490
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.090 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3114E-01
 HT FLOW CONVERGENCE VALUE= .2840E-01 CRITERION= .3395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 35 COMPLETED. CUM ITER = 281
 *** TIME = .311632E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5551E-05 OSCILLATION LIMIT = .4379
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.559 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3068E-01
 HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3393 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 36 COMPLETED. CUM ITER = 282
 *** TIME = .312421E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5660E-05 OSCILLATION LIMIT = .4465
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.088 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3114E-01
 HT FLOW CONVERGENCE VALUE= .2839E-01 CRITERION= .3395 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 37 COMPLETED. CUM ITER = 283
 *** TIME = .313209E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5524E-05 OSCILLATION LIMIT = .4358
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.560 CRITERION= .3396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3068E-01
 HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3393 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 38 COMPLETED. CUM ITER = 284
 *** TIME = .313998E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5630E-05 OSCILLATION LIMIT = .4441
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.086 CRITERION= .3394
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3113E-01
 HT FLOW CONVERGENCE VALUE= .2838E-01 CRITERION= .3394 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 39 COMPLETED. CUM ITER = 285
 *** TIME = .314787E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5497E-05 OSCILLATION LIMIT = .4337
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.562 CRITERION= .3395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3069E-01
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .3392 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 40 COMPLETED. CUM ITER = 286
 *** TIME = .315576E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5600E-05 OSCILLATION LIMIT = .4418

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:34:05 JUN 17, 1995 CP= 15246.250
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3452
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2104 CRITERION= .3391 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 287
 *** TIME = .323466E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3149E-05 OSCILLATION LIMIT = 2.485
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.87 CRITERION= .3450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2040 CRITERION= .3386 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 288
 *** TIME = .331355E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5630E-05 OSCILLATION LIMIT = 4.442
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3446
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2041 CRITERION= .3384 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 289
 *** TIME = .339245E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5267E-05 OSCILLATION LIMIT = 4.155
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.87 CRITERION= .3444
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2037 CRITERION= .3380 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 290
 *** TIME = .347134E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5370E-05 OSCILLATION LIMIT = 4.237
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2039 CRITERION= .3378 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 291
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5277E-05 OSCILLATION LIMIT = 4.163
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.87 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2037 CRITERION= .3373 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 292
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5348E-05 OSCILLATION LIMIT = 4.219
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2039 CRITERION= .3372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 293

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*** TIME = .370802E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5271E-05    OSCILLATION LIMIT = 4.158
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 63.87    CRITERION= .3432
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2036    CRITERION= .3367    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 294
*** TIME = .378692E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5328E-05    OSCILLATION LIMIT = 4.204
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 64.41    CRITERION= .3428
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2036    CRITERION= .3366    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 295
*** TIME = .386581E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5264E-05    OSCILLATION LIMIT = 4.153
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 63.87    CRITERION= .3426
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2033    CRITERION= .3361    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 296
*** TIME = .394470E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5310E-05    OSCILLATION LIMIT = 4.190
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 64.41    CRITERION= .3422
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2031    CRITERION= .3359    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 297
*** TIME = .402360E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5256E-05    OSCILLATION LIMIT = 4.147
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 63.87    CRITERION= .3420
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2028    CRITERION= .3355    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 298
*** TIME = .410249E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5294E-05    OSCILLATION LIMIT = 4.176
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 64.41    CRITERION= .3415
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2027    CRITERION= .3353    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 299
*** TIME = .418139E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5246E-05    OSCILLATION LIMIT = 4.139
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 63.87    CRITERION= .3413
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2024    CRITERION= .3348    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 300
*** TIME = .426028E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5278E-05    OSCILLATION LIMIT = 4.164
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 64.41    CRITERION= .3409
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
    HT FLOW CONVERGENCE VALUE= .2023    CRITERION= .3347    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 301
*** TIME = .433917E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5236E-05 OSCILLATION LIMIT = 4.131
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3407
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2020 CRITERION= .3342 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 302
*** TIME = .441807E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5262E-05 OSCILLATION LIMIT = 4.152
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3403
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2019 CRITERION= .3341 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 303
*** TIME = .449696E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5224E-05 OSCILLATION LIMIT = 4.121
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3401
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2016 CRITERION= .3336 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 304
*** TIME = .457586E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5247E-05 OSCILLATION LIMIT = 4.140
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3397
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2014 CRITERION= .3334 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 305
*** TIME = .465475E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5212E-05 OSCILLATION LIMIT = 4.112
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3395
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2012 CRITERION= .3330 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 306
*** TIME = .473364E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5233E-05 OSCILLATION LIMIT = 4.128
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2010 CRITERION= .3328 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 307
*** TIME = .481254E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5200E-05 OSCILLATION LIMIT = 4.102
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3389
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
HT FLOW CONVERGENCE VALUE= .2007 CRITERION= .3323 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 308
*** TIME = .489143E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5218E-05 OSCILLATION LIMIT = 4.117
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3385

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2005 CRITERION= .3322 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 309
 *** TIME = .497033E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5188E-05 OSCILLATION LIMIT = 4.093
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3383
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2003 CRITERION= .3317 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 310
 *** TIME = .504922E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5205E-05 OSCILLATION LIMIT = 4.106
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3379
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .2001 CRITERION= .3315 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 311
 *** TIME = .512811E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5175E-05 OSCILLATION LIMIT = 4.083
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3376
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1998 CRITERION= .3311 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 312
 *** TIME = .520701E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5191E-05 OSCILLATION LIMIT = 4.095
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3372
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1996 CRITERION= .3309 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 313
 *** TIME = .528590E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5163E-05 OSCILLATION LIMIT = 4.073
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1994 CRITERION= .3304 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 314
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5177E-05 OSCILLATION LIMIT = 4.084
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3366
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1991 CRITERION= .3303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 315
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5150E-05 OSCILLATION LIMIT = 4.063
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3364
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1989 CRITERION= .3298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 316
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5163E-05 OSCILLATION LIMIT = 4.073
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3360
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1986 CRITERION= .3297 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 317
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5137E-05 OSCILLATION LIMIT = 4.052
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1984 CRITERION= .3292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 318
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5149E-05 OSCILLATION LIMIT = 4.062
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3354
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1981 CRITERION= .3290 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 319
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5124E-05 OSCILLATION LIMIT = 4.042
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3352
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1980 CRITERION= .3286 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 320
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5136E-05 OSCILLATION LIMIT = 4.052
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3348
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1977 CRITERION= .3284 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 321
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5111E-05 OSCILLATION LIMIT = 4.032
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1975 CRITERION= .3279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 322
 *** TIME = .599595E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5123E-05 OSCILLATION LIMIT = 4.042
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.41 CRITERION= .3342
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1973 CRITERION= .3278 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 323
 *** TIME = .607484E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5098E-05 OSCILLATION LIMIT = 4.022
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 63.88 CRITERION= .3340
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
 HT FLOW CONVERGENCE VALUE= .1971 CRITERION= .3273 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 324
 *** TIME = .615374E+08 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .5109E-05  OSCILLATION LIMIT = 4.031
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 64.41  CRITERION= .3336
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
  HT FLOW CONVERGENCE VALUE= .1968  CRITERION= .3272  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 39 COMPLETED.  CUM ITER = 325
*** TIME = .623263E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5085E-05  OSCILLATION LIMIT = 4.012
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED
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  HT FLOW CONVERGENCE VALUE= 63.88  CRITERION= .3333
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2232
  HT FLOW CONVERGENCE VALUE= .1966  CRITERION= .3267  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 40 COMPLETED.  CUM ITER = 326
*** TIME = .631152E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5095E-05  OSCILLATION LIMIT = 4.020
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303          VERSION=HP 9000/7XX  10:11:01 JUN 17, 1995 CP= 17436.310
FOR SUPPORT CALL ROBERT BAHNEY  PHONE (702) 794-5337  FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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  HT FLOW CONVERGENCE VALUE= 44.62  CRITERION= .3297
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
  HT FLOW CONVERGENCE VALUE= .1321  CRITERION= .3266  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 1 COMPLETED.  CUM ITER = 327
*** TIME = .639042E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8291E-05  OSCILLATION LIMIT = 6.541
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED
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  HT FLOW CONVERGENCE VALUE= 44.08  CRITERION= .3296
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
  HT FLOW CONVERGENCE VALUE= .1320  CRITERION= .3262  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 2 COMPLETED.  CUM ITER = 328
*** TIME = .646931E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7906E-05  OSCILLATION LIMIT = 6.237
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED
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  HT FLOW CONVERGENCE VALUE= 44.62  CRITERION= .3292
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
  HT FLOW CONVERGENCE VALUE= .1334  CRITERION= .3261  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 3 COMPLETED.  CUM ITER = 329
*** TIME = .654821E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6706E-05  OSCILLATION LIMIT = 5.291
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED
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  HT FLOW CONVERGENCE VALUE= 44.08  CRITERION= .3290
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
  HT FLOW CONVERGENCE VALUE= .1318  CRITERION= .3256  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 4 COMPLETED.  CUM ITER = 330
*** TIME = .662710E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7862E-05  OSCILLATION LIMIT = 6.203
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED
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  HT FLOW CONVERGENCE VALUE= 44.62  CRITERION= .3286
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
  HT FLOW CONVERGENCE VALUE= .1330  CRITERION= .3255  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
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*** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 331
 *** TIME = .670599E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6828E-05 OSCILLATION LIMIT = 5.387
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3285
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1318 CRITERION= .3251 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 332
 *** TIME = .678489E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7717E-05 OSCILLATION LIMIT = 6.088
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1326 CRITERION= .3250 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 333
 *** TIME = .686378E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6923E-05 OSCILLATION LIMIT = 5.462
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3280
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1316 CRITERION= .3246 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 334
 *** TIME = .694268E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-05 OSCILLATION LIMIT = 6.000
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1323 CRITERION= .3245 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 335
 *** TIME = .702157E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6991E-05 OSCILLATION LIMIT = 5.516
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3274
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1315 CRITERION= .3240 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 336
 *** TIME = .710046E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7518E-05 OSCILLATION LIMIT = 5.931
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3270
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1320 CRITERION= .3239 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 337
 *** TIME = .717936E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7041E-05 OSCILLATION LIMIT = 5.555
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3269
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1313 CRITERION= .3235 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 338
 *** TIME = .725825E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7450E-05 OSCILLATION LIMIT = 5.877
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548

HT FLOW CONVERGENCE VALUE= .1317 CRITERION= .3234 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 339
 *** TIME = .733715E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7075E-05 OSCILLATION LIMIT = 5.582
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3264
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1311 CRITERION= .3229 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 340
 *** TIME = .741604E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7395E-05 OSCILLATION LIMIT = 5.834
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3260
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1314 CRITERION= .3229 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 341
 *** TIME = .749493E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7097E-05 OSCILLATION LIMIT = 5.599
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3259
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1309 CRITERION= .3224 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 342
 *** TIME = .757383E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7351E-05 OSCILLATION LIMIT = 5.799
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3255
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1311 CRITERION= .3223 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 343
 *** TIME = .765272E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7112E-05 OSCILLATION LIMIT = 5.611
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3253
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1307 CRITERION= .3219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 344
 *** TIME = .773162E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7315E-05 OSCILLATION LIMIT = 5.771
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3249
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1309 CRITERION= .3218 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 345
 *** TIME = .781051E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7120E-05 OSCILLATION LIMIT = 5.617
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3248
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1304 CRITERION= .3213 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 346
 *** TIME = .788940E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7284E-05 OSCILLATION LIMIT = 5.747
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3244
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1306 CRITERION= .3212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 347
 *** TIME = .796830E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7123E-05 OSCILLATION LIMIT = 5.620
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3243
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1302 CRITERION= .3208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 348
 *** TIME = .804719E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7259E-05 OSCILLATION LIMIT = 5.727
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3239
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1303 CRITERION= .3207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 349
 *** TIME = .812609E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7123E-05 OSCILLATION LIMIT = 5.620
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3237
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1300 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 350
 *** TIME = .820498E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7237E-05 OSCILLATION LIMIT = 5.709
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3233
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1301 CRITERION= .3202 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 351
 *** TIME = .828387E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7120E-05 OSCILLATION LIMIT = 5.617
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3232
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1298 CRITERION= .3197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 352
 *** TIME = .836277E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7216E-05 OSCILLATION LIMIT = 5.693
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3228
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1298 CRITERION= .3196 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 353
 *** TIME = .844166E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7114E-05 OSCILLATION LIMIT = 5.613
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3227
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1295 CRITERION= .3192 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 354
 *** TIME = .852056E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7198E-05 OSCILLATION LIMIT = 5.679

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3223
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1295 CRITERION= .3191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 355
 *** TIME = .859945E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7108E-05 OSCILLATION LIMIT = 5.607
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3221
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1292 CRITERION= .3187 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 356
 *** TIME = .867834E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7181E-05 OSCILLATION LIMIT = 5.666
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3218
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1292 CRITERION= .3186 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 357
 *** TIME = .875724E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7100E-05 OSCILLATION LIMIT = 5.601
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3216
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1290 CRITERION= .3181 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 358
 *** TIME = .883613E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7166E-05 OSCILLATION LIMIT = 5.653
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3212
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1290 CRITERION= .3180 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 359
 *** TIME = .891503E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7091E-05 OSCILLATION LIMIT = 5.594
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1287 CRITERION= .3176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 360
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7150E-05 OSCILLATION LIMIT = 5.641
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62 CRITERION= .3207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1287 CRITERION= .3175 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 361
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7081E-05 OSCILLATION LIMIT = 5.587
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08 CRITERION= .3206
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
 HT FLOW CONVERGENCE VALUE= .1285 CRITERION= .3171 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 362

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*** TIME = .915171E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7136E-05    OSCILLATION LIMIT = 5.630
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62    CRITERION= .3202
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
HT FLOW CONVERGENCE VALUE= .1285    CRITERION= .3170    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 363
*** TIME = .923060E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7071E-05    OSCILLATION LIMIT = 5.579
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08    CRITERION= .3200
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
HT FLOW CONVERGENCE VALUE= .1282    CRITERION= .3165    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 38 COMPLETED. CUM ITER = 364
*** TIME = .930950E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7122E-05    OSCILLATION LIMIT = 5.619
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.62    CRITERION= .3196
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
HT FLOW CONVERGENCE VALUE= .1282    CRITERION= .3164    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 39 COMPLETED. CUM ITER = 365
*** TIME = .938839E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7060E-05    OSCILLATION LIMIT = 5.570
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.08    CRITERION= .3195
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1548
HT FLOW CONVERGENCE VALUE= .1280    CRITERION= .3160    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 40 COMPLETED. CUM ITER = 366
*** TIME = .946728E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7108E-05    OSCILLATION LIMIT = 5.608

***** ANSYS SOLVE COMMAND *****
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:48:01 JUN 17, 1995 CP= 19628.690
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 33.65    CRITERION= .3178
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1168
HT FLOW CONVERGENCE VALUE= .9432E-01    CRITERION= .3160    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 1 COMPLETED. CUM ITER = 367
*** TIME = .954618E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1001E-04    OSCILLATION LIMIT = 7.898
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11    CRITERION= .3177
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9410E-01    CRITERION= .3155    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 2 COMPLETED. CUM ITER = 368
*** TIME = .962507E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9805E-05    OSCILLATION LIMIT = 7.736
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65    CRITERION= .3173
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9486E-01    CRITERION= .3155    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 3 COMPLETED. CUM ITER = 369
*** TIME = .970397E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8806E-05 OSCILLATION LIMIT = 6.947
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3172
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9401E-01 CRITERION= .3151 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 370
*** TIME = .978286E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9766E-05 OSCILLATION LIMIT = 7.705
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3168
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9463E-01 CRITERION= .3150 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 371
*** TIME = .986175E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8900E-05 OSCILLATION LIMIT = 7.022
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3168
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9391E-01 CRITERION= .3146 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 372
*** TIME = .994065E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9653E-05 OSCILLATION LIMIT = 7.615
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3164
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9440E-01 CRITERION= .3146 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 373
*** TIME = .100195E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8973E-05 OSCILLATION LIMIT = 7.079
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3163
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9380E-01 CRITERION= .3141 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 374
*** TIME = .100984E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9564E-05 OSCILLATION LIMIT = 7.546
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3159
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9420E-01 CRITERION= .3141 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 375
*** TIME = .101773E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9026E-05 OSCILLATION LIMIT = 7.121
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3158
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9367E-01 CRITERION= .3137 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 376
*** TIME = .102562E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9495E-05 OSCILLATION LIMIT = 7.491
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3155

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9400E-01 CRITERION= .3136 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 377
 *** TIME = .103351E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9063E-05 OSCILLATION LIMIT = 7.150
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9354E-01 CRITERION= .3132 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 378
 *** TIME = .104140E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9440E-05 OSCILLATION LIMIT = 7.448
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9381E-01 CRITERION= .3132 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 379
 *** TIME = .104929E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9088E-05 OSCILLATION LIMIT = 7.170
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.11 CRITERION= .3149
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9340E-01 CRITERION= .3128 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 380
 *** TIME = .105718E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9395E-05 OSCILLATION LIMIT = 7.412
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3145
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9363E-01 CRITERION= .3127 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 381
 *** TIME = .106507E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9105E-05 OSCILLATION LIMIT = 7.183
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3144
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9325E-01 CRITERION= .3123 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 382
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9359E-05 OSCILLATION LIMIT = 7.384
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3141
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9344E-01 CRITERION= .3122 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 383
 *** TIME = .108085E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9115E-05 OSCILLATION LIMIT = 7.191
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9311E-01 CRITERION= .3118 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 384
 *** TIME = .108874E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9328E-05 OSCILLATION LIMIT = 7.359
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3136
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9328E-01 CRITERION= .3118 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 385
 *** TIME = .109663E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9120E-05 OSCILLATION LIMIT = 7.195
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9296E-01 CRITERION= .3114 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 386
 *** TIME = .110452E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9302E-05 OSCILLATION LIMIT = 7.339
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3131
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9310E-01 CRITERION= .3113 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 387
 *** TIME = .111241E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9121E-05 OSCILLATION LIMIT = 7.196
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9281E-01 CRITERION= .3109 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 388
 *** TIME = .112030E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9280E-05 OSCILLATION LIMIT = 7.321
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3127
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9293E-01 CRITERION= .3108 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 389
 *** TIME = .112818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9119E-05 OSCILLATION LIMIT = 7.195
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3126
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9266E-01 CRITERION= .3104 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 390
 *** TIME = .113607E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9259E-05 OSCILLATION LIMIT = 7.305
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3122
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .9277E-01 CRITERION= .3104 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 25 COMPLETED. CUM ITER = 391
 *** TIME = .114396E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9115E-05 OSCILLATION LIMIT = 7.192
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3121
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
 HT FLOW CONVERGENCE VALUE= .9250E-01 CRITERION= .3100 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 26 COMPLETED. CUM ITER = 392
 *** TIME = .115185E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .9242E-05  OSCILLATION LIMIT = 7.291
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.65  CRITERION= .3118
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
  HT FLOW CONVERGENCE VALUE= .9260E-01 CRITERION= .3099  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 27 COMPLETED. CUM ITER = 393
*** TIME = .115974E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9110E-05  OSCILLATION LIMIT = 7.187
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.12  CRITERION= .3117
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
  HT FLOW CONVERGENCE VALUE= .9235E-01 CRITERION= .3095  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 28 COMPLETED. CUM ITER = 394
*** TIME = .116763E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9225E-05  OSCILLATION LIMIT = 7.278
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.65  CRITERION= .3113
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
  HT FLOW CONVERGENCE VALUE= .9243E-01 CRITERION= .3094  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 29 COMPLETED. CUM ITER = 395
*** TIME = .117552E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9103E-05  OSCILLATION LIMIT = 7.182
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.12  CRITERION= .3112
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
  HT FLOW CONVERGENCE VALUE= .9220E-01 CRITERION= .3090  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 30 COMPLETED. CUM ITER = 396
*** TIME = .118341E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9210E-05  OSCILLATION LIMIT = 7.266
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.65  CRITERION= .3108
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
  HT FLOW CONVERGENCE VALUE= .9227E-01 CRITERION= .3090  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 31 COMPLETED. CUM ITER = 397
*** TIME = .119130E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9096E-05  OSCILLATION LIMIT = 7.176
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.12  CRITERION= .3107
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
  HT FLOW CONVERGENCE VALUE= .9206E-01 CRITERION= .3086  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 398
*** TIME = .119919E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9195E-05  OSCILLATION LIMIT = 7.255
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.65  CRITERION= .3104
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
  HT FLOW CONVERGENCE VALUE= .9212E-01 CRITERION= .3085  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 399
*** TIME = .120708E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9087E-05  OSCILLATION LIMIT = 7.169
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 33.12  CRITERION= .3103
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
  HT FLOW CONVERGENCE VALUE= .9190E-01 CRITERION= .3081  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 400
*** TIME = .121497E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9181E-05 OSCILLATION LIMIT = 7.244
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3099
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9195E-01 CRITERION= .3080 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 401
*** TIME = .122286E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9078E-05 OSCILLATION LIMIT = 7.162
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3098
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9174E-01 CRITERION= .3076 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 402
*** TIME = .123075E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9168E-05 OSCILLATION LIMIT = 7.233
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3094
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9180E-01 CRITERION= .3076 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 403
*** TIME = .123864E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9068E-05 OSCILLATION LIMIT = 7.154
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3093
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9160E-01 CRITERION= .3072 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 404
*** TIME = .124653E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9154E-05 OSCILLATION LIMIT = 7.222
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.65 CRITERION= .3090
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
HT FLOW CONVERGENCE VALUE= .9164E-01 CRITERION= .3071 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 405
*** TIME = .125441E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9058E-05 OSCILLATION LIMIT = 7.146
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.12 CRITERION= .3089
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1166
HT FLOW CONVERGENCE VALUE= .9144E-01 CRITERION= .3067 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 406
*** TIME = .126230E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .9141E-05 OSCILLATION LIMIT = 7.212

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 11:24:57 JUN 17, 1995 CP= 21819.980
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF.

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HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3079
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9381E-01

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HT FLOW CONVERGENCE VALUE= .7257E-01 CRITERION= .3067 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 407
 *** TIME = .127019E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1088E-04 OSCILLATION LIMIT = 8.582
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7242E-01 CRITERION= .3063 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 408
 *** TIME = .127808E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1074E-04 OSCILLATION LIMIT = 8.476
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9381E-01
 HT FLOW CONVERGENCE VALUE= .7284E-01 CRITERION= .3063 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 409
 *** TIME = .128597E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1004E-04 OSCILLATION LIMIT = 7.919
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7235E-01 CRITERION= .3059 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 410
 *** TIME = .129386E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 8.459
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .7270E-01 CRITERION= .3059 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 411
 *** TIME = .130175E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1010E-04 OSCILLATION LIMIT = 7.965
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3070
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7228E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 412
 *** TIME = .130964E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1065E-04 OSCILLATION LIMIT = 8.400
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3067
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .7256E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 413
 *** TIME = .131753E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1014E-04 OSCILLATION LIMIT = 8.000
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3066
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7219E-01 CRITERION= .3051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 414
 *** TIME = .132542E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1059E-04 OSCILLATION LIMIT = 8.353
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3063
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .7244E-01 CRITERION= .3051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 415
 *** TIME = .133331E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1017E-04 OSCILLATION LIMIT = 8.025
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7210E-01 CRITERION= .3047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 416
 *** TIME = .134120E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1054E-04 OSCILLATION LIMIT = 8.316
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3059
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .7231E-01 CRITERION= .3047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 417
 *** TIME = .134909E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1019E-04 OSCILLATION LIMIT = 8.042
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3058
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7201E-01 CRITERION= .3043 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 418
 *** TIME = .135698E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1050E-04 OSCILLATION LIMIT = 8.286
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .7224E-01 CRITERION= .3043 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 419
 *** TIME = .136487E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1021E-04 OSCILLATION LIMIT = 8.053
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7217E-01 CRITERION= .3039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 420
 *** TIME = .137276E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = 8.260
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
 HT FLOW CONVERGENCE VALUE= .7233E-01 CRITERION= .3039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 421
 *** TIME = .138065E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1021E-04 OSCILLATION LIMIT = 8.059
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3050
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
 HT FLOW CONVERGENCE VALUE= .7209E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 422
 *** TIME = .138853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1044E-04 OSCILLATION LIMIT = 8.239

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3047
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
HT FLOW CONVERGENCE VALUE= .7223E-01 CRITERION= .3035 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 423

*** TIME = .139642E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.062

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3046
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7199E-01 CRITERION= .3031 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 424

*** TIME = .140431E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1042E-04 OSCILLATION LIMIT = 8.221

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3043
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
HT FLOW CONVERGENCE VALUE= .7212E-01 CRITERION= .3031 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 425

*** TIME = .141220E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.063

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3042
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7189E-01 CRITERION= .3027 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 426

*** TIME = .142009E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1040E-04 OSCILLATION LIMIT = 8.206

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3039
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
HT FLOW CONVERGENCE VALUE= .7200E-01 CRITERION= .3027 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 427

*** TIME = .142798E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.062

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3038
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7179E-01 CRITERION= .3023 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 428

*** TIME = .143587E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1038E-04 OSCILLATION LIMIT = 8.192

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3035
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
HT FLOW CONVERGENCE VALUE= .7189E-01 CRITERION= .3023 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 429

*** TIME = .144376E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.059

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3034
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7168E-01 CRITERION= .3019 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 430

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*** TIME = .145165E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1037E-04    OSCILLATION LIMIT = 8.179
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.05    CRITERION= .3031
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
    HT FLOW CONVERGENCE VALUE= .7195E-01    CRITERION= .3019    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 431
*** TIME = .145954E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1021E-04    OSCILLATION LIMIT = 8.055
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.52    CRITERION= .3030
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
    HT FLOW CONVERGENCE VALUE= .7186E-01    CRITERION= .3015    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 432
*** TIME = .146743E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1035E-04    OSCILLATION LIMIT = 8.167
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.05    CRITERION= .3027
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9379E-01
    HT FLOW CONVERGENCE VALUE= .7194E-01    CRITERION= .3015    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 433
*** TIME = .147532E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1020E-04    OSCILLATION LIMIT = 8.050
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.52    CRITERION= .3026
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
    HT FLOW CONVERGENCE VALUE= .7176E-01    CRITERION= .3011    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 434
*** TIME = .148321E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1034E-04    OSCILLATION LIMIT = 8.157
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.05    CRITERION= .3023
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
    HT FLOW CONVERGENCE VALUE= .7183E-01    CRITERION= .3011    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 435
*** TIME = .149110E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1020E-04    OSCILLATION LIMIT = 8.045
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.52    CRITERION= .3022
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
    HT FLOW CONVERGENCE VALUE= .7165E-01    CRITERION= .3007    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 436
*** TIME = .149899E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1033E-04    OSCILLATION LIMIT = 8.147
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 27.05    CRITERION= .3019
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
    HT FLOW CONVERGENCE VALUE= .7172E-01    CRITERION= .3007    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 437
*** TIME = .150688E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1019E-04    OSCILLATION LIMIT = 8.039
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.52    CRITERION= .3018
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
    HT FLOW CONVERGENCE VALUE= .7156E-01    CRITERION= .3003    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 438
*** TIME = .151477E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1031E-04 OSCILLATION LIMIT = 8.137
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3015
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
HT FLOW CONVERGENCE VALUE= .7163E-01 CRITERION= .3003 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 439
*** TIME = .152265E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = 8.033
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3014
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7146E-01 CRITERION= .2999 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 440
*** TIME = .153054E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1030E-04 OSCILLATION LIMIT = 8.127
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3011
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
HT FLOW CONVERGENCE VALUE= .7151E-01 CRITERION= .2999 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 441
*** TIME = .153843E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1017E-04 OSCILLATION LIMIT = 8.027
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3010
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7204E-01 CRITERION= .2995 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 442
*** TIME = .154632E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1029E-04 OSCILLATION LIMIT = 8.118
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3007
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
HT FLOW CONVERGENCE VALUE= .7226E-01 CRITERION= .2995 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 443
*** TIME = .155421E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1016E-04 OSCILLATION LIMIT = 8.019
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3006
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7210E-01 CRITERION= .2991 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 444
*** TIME = .156210E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1028E-04 OSCILLATION LIMIT = 8.108
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 27.05 CRITERION= .3003
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9378E-01
HT FLOW CONVERGENCE VALUE= .7215E-01 CRITERION= .2991 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 445
*** TIME = .156999E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1015E-04 OSCILLATION LIMIT = 8.012
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3002

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9364E-01
HT FLOW CONVERGENCE VALUE= .7207E-01 CRITERION= .2987 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 446
*** TIME = .157788E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1027E-04 OSCILLATION LIMIT = 8.099

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 12:01:55 JUN 17, 1995 CP= 24010.630
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2996
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7917E-01
HT FLOW CONVERGENCE VALUE= .5923E-01 CRITERION= .2987 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 447
*** TIME = .158577E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1502E-04 OSCILLATION LIMIT = 11.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2995
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5897E-01 CRITERION= .2983 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 448
*** TIME = .159366E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1524E-04 OSCILLATION LIMIT = 12.02
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2991
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7917E-01
HT FLOW CONVERGENCE VALUE= .5933E-01 CRITERION= .2983 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 449
*** TIME = .160155E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1412E-04 OSCILLATION LIMIT = 11.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2991
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5891E-01 CRITERION= .2979 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 450
*** TIME = .160944E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2987
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7916E-01
HT FLOW CONVERGENCE VALUE= .5921E-01 CRITERION= .2978 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 451
*** TIME = .161733E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1421E-04 OSCILLATION LIMIT = 11.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2987
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5885E-01 CRITERION= .2975 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 452
*** TIME = .162522E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1506E-04 OSCILLATION LIMIT = 11.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7916E-01
 HT FLOW CONVERGENCE VALUE= .5917E-01 CRITERION= .2974 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 453
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1429E-04 OSCILLATION LIMIT = 11.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5918E-01 CRITERION= .2971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 454
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1498E-04 OSCILLATION LIMIT = 11.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2979
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7916E-01
 HT FLOW CONVERGENCE VALUE= .5961E-01 CRITERION= .2970 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 455
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1433E-04 OSCILLATION LIMIT = 11.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2979
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5938E-01 CRITERION= .2967 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 456
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1491E-04 OSCILLATION LIMIT = 11.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7916E-01
 HT FLOW CONVERGENCE VALUE= .5956E-01 CRITERION= .2966 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 457
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1437E-04 OSCILLATION LIMIT = 11.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5931E-01 CRITERION= .2962 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 458
 *** TIME = .167255E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1485E-04 OSCILLATION LIMIT = 11.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2971
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7916E-01
 HT FLOW CONVERGENCE VALUE= .5945E-01 CRITERION= .2962 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 459
 *** TIME = .168044E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1440E-04 OSCILLATION LIMIT = 11.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5924E-01 CRITERION= .2958 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 460
 *** TIME = .168833E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .1481E-04 OSCILLATION LIMIT = 11.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2967
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
HT FLOW CONVERGENCE VALUE= .5937E-01 CRITERION= .2958 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 461
*** TIME = .169622E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1441E-04 OSCILLATION LIMIT = 11.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2966
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5916E-01 CRITERION= .2954 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 462
*** TIME = .170411E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1478E-04 OSCILLATION LIMIT = 11.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2963
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
HT FLOW CONVERGENCE VALUE= .5927E-01 CRITERION= .2954 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 463
*** TIME = .171200E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1442E-04 OSCILLATION LIMIT = 11.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2962
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5907E-01 CRITERION= .2950 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 464
*** TIME = .171989E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1475E-04 OSCILLATION LIMIT = 11.63
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2959
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
HT FLOW CONVERGENCE VALUE= .5917E-01 CRITERION= .2950 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 465
*** TIME = .172778E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1443E-04 OSCILLATION LIMIT = 11.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2958
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5901E-01 CRITERION= .2946 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 466
*** TIME = .173567E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1472E-04 OSCILLATION LIMIT = 11.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2955
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
HT FLOW CONVERGENCE VALUE= .5931E-01 CRITERION= .2946 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 467
*** TIME = .174356E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1443E-04 OSCILLATION LIMIT = 11.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2954
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
HT FLOW CONVERGENCE VALUE= .5914E-01 CRITERION= .2942 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 468
 *** TIME = .175145E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1470E-04 OSCILLATION LIMIT = 11.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2951
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
 HT FLOW CONVERGENCE VALUE= .5922E-01 CRITERION= .2942 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 469
 *** TIME = .175934E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1443E-04 OSCILLATION LIMIT = 11.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2950
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5907E-01 CRITERION= .2938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 470
 *** TIME = .176723E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1468E-04 OSCILLATION LIMIT = 11.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
 HT FLOW CONVERGENCE VALUE= .5920E-01 CRITERION= .2938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 471
 *** TIME = .177512E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1442E-04 OSCILLATION LIMIT = 11.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2946
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5907E-01 CRITERION= .2934 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 472
 *** TIME = .178300E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1466E-04 OSCILLATION LIMIT = 11.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2943
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7915E-01
 HT FLOW CONVERGENCE VALUE= .5919E-01 CRITERION= .2933 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 473
 *** TIME = .179089E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1442E-04 OSCILLATION LIMIT = 11.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2942
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5903E-01 CRITERION= .2930 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 474
 *** TIME = .179878E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1464E-04 OSCILLATION LIMIT = 11.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5910E-01 CRITERION= .2929 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 475
 *** TIME = .180667E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1441E-04 OSCILLATION LIMIT = 11.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01

HT FLOW CONVERGENCE VALUE= .5895E-01 CRITERION= .2926 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 476
 *** TIME = .181456E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1463E-04 OSCILLATION LIMIT = 11.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5901E-01 CRITERION= .2925 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 477
 *** TIME = .182245E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1441E-04 OSCILLATION LIMIT = 11.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5887E-01 CRITERION= .2922 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 478
 *** TIME = .183034E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1461E-04 OSCILLATION LIMIT = 11.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5892E-01 CRITERION= .2921 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 479
 *** TIME = .183823E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1440E-04 OSCILLATION LIMIT = 11.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5877E-01 CRITERION= .2918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 480
 *** TIME = .184612E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1460E-04 OSCILLATION LIMIT = 11.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2926
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5881E-01 CRITERION= .2917 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 481
 *** TIME = .185401E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1439E-04 OSCILLATION LIMIT = 11.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2926
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5868E-01 CRITERION= .2913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 482
 *** TIME = .186190E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1459E-04 OSCILLATION LIMIT = 11.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2922
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5874E-01 CRITERION= .2913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 483
 *** TIME = .186979E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1438E-04 OSCILLATION LIMIT = 11.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2922
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5868E-01 CRITERION= .2909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 484
 *** TIME = .187768E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1457E-04 OSCILLATION LIMIT = 11.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .2918
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7914E-01
 HT FLOW CONVERGENCE VALUE= .5872E-01 CRITERION= .2909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 485
 *** TIME = .188557E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1437E-04 OSCILLATION LIMIT = 11.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .2917
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7904E-01
 HT FLOW CONVERGENCE VALUE= .5861E-01 CRITERION= .2905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 486
 *** TIME = .189346E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1456E-04 OSCILLATION LIMIT = 11.49

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 12:38:52 JUN 17, 1995 CP= 26201.630
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2912
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6788E-01
 HT FLOW CONVERGENCE VALUE= .5008E-01 CRITERION= .2905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 487
 *** TIME = .190135E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1512E-04 OSCILLATION LIMIT = 11.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2911
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .5001E-01 CRITERION= .2902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 488
 *** TIME = .190924E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1509E-04 OSCILLATION LIMIT = 11.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2908
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6788E-01
 HT FLOW CONVERGENCE VALUE= .5016E-01 CRITERION= .2902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 489
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1459E-04 OSCILLATION LIMIT = 11.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2908
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4996E-01 CRITERION= .2898 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 490
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1508E-04 OSCILLATION LIMIT = 11.90

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2905
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6788E-01
 HT FLOW CONVERGENCE VALUE= .5008E-01 CRITERION= .2898 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 491
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1461E-04 OSCILLATION LIMIT = 11.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4990E-01 CRITERION= .2895 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 492
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1504E-04 OSCILLATION LIMIT = 11.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
 HT FLOW CONVERGENCE VALUE= .5001E-01 CRITERION= .2895 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 493
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1463E-04 OSCILLATION LIMIT = 11.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4985E-01 CRITERION= .2891 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 494
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1501E-04 OSCILLATION LIMIT = 11.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
 HT FLOW CONVERGENCE VALUE= .4994E-01 CRITERION= .2891 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 495
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1464E-04 OSCILLATION LIMIT = 11.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2897
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4979E-01 CRITERION= .2888 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 496
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1498E-04 OSCILLATION LIMIT = 11.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
 HT FLOW CONVERGENCE VALUE= .4987E-01 CRITERION= .2887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 497
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1464E-04 OSCILLATION LIMIT = 11.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4973E-01 CRITERION= .2884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 498


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*** TIME = .198813E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1496E-04    OSCILLATION LIMIT = 11.80
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.60    CRITERION= .2891
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
    HT FLOW CONVERGENCE VALUE= .4983E-01    CRITERION= .2884    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 499
*** TIME = .199602E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1465E-04    OSCILLATION LIMIT = 11.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.08    CRITERION= .2890
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
    HT FLOW CONVERGENCE VALUE= .4971E-01    CRITERION= .2881    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 500
*** TIME = .200391E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1494E-04    OSCILLATION LIMIT = 11.79
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.60    CRITERION= .2887
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
    HT FLOW CONVERGENCE VALUE= .4980E-01    CRITERION= .2880    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 501
*** TIME = .201180E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1464E-04    OSCILLATION LIMIT = 11.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.08    CRITERION= .2887
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
    HT FLOW CONVERGENCE VALUE= .4968E-01    CRITERION= .2877    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 502
*** TIME = .201969E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1492E-04    OSCILLATION LIMIT = 11.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.60    CRITERION= .2884
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
    HT FLOW CONVERGENCE VALUE= .4976E-01    CRITERION= .2877    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 503
*** TIME = .202758E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1464E-04    OSCILLATION LIMIT = 11.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.08    CRITERION= .2883
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
    HT FLOW CONVERGENCE VALUE= .4964E-01    CRITERION= .2873    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 504
*** TIME = .203547E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1490E-04    OSCILLATION LIMIT = 11.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.60    CRITERION= .2880
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
    HT FLOW CONVERGENCE VALUE= .4971E-01    CRITERION= .2873    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 505
*** TIME = .204335E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1464E-04    OSCILLATION LIMIT = 11.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 19.08    CRITERION= .2880
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
    HT FLOW CONVERGENCE VALUE= .4960E-01    CRITERION= .2870    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 506
*** TIME = .205124E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1489E-04 OSCILLATION LIMIT = 11.75
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2876
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6787E-01
HT FLOW CONVERGENCE VALUE= .4965E-01 CRITERION= .2870 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 507
*** TIME = .205913E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1463E-04 OSCILLATION LIMIT = 11.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2876
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
HT FLOW CONVERGENCE VALUE= .4954E-01 CRITERION= .2866 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 508
*** TIME = .206702E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1487E-04 OSCILLATION LIMIT = 11.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2873
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
HT FLOW CONVERGENCE VALUE= .4961E-01 CRITERION= .2866 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 509
*** TIME = .207491E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1463E-04 OSCILLATION LIMIT = 11.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2873
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
HT FLOW CONVERGENCE VALUE= .4952E-01 CRITERION= .2863 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 510
*** TIME = .208280E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1486E-04 OSCILLATION LIMIT = 11.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2869
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
HT FLOW CONVERGENCE VALUE= .4957E-01 CRITERION= .2863 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 511
*** TIME = .209069E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1462E-04 OSCILLATION LIMIT = 11.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2869
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
HT FLOW CONVERGENCE VALUE= .4947E-01 CRITERION= .2859 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 512
*** TIME = .209858E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1485E-04 OSCILLATION LIMIT = 11.71
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2866
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
HT FLOW CONVERGENCE VALUE= .4951E-01 CRITERION= .2859 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 513
*** TIME = .210647E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1461E-04 OSCILLATION LIMIT = 11.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2866

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4943E-01 CRITERION= .2856 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 514
 *** TIME = .211436E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1484E-04 OSCILLATION LIMIT = 11.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4948E-01 CRITERION= .2856 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 515
 *** TIME = .212225E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1460E-04 OSCILLATION LIMIT = 11.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4939E-01 CRITERION= .2852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 516
 *** TIME = .213014E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1482E-04 OSCILLATION LIMIT = 11.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2859
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4943E-01 CRITERION= .2852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 517
 *** TIME = .213803E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1460E-04 OSCILLATION LIMIT = 11.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2858
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4934E-01 CRITERION= .2849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 518
 *** TIME = .214592E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1481E-04 OSCILLATION LIMIT = 11.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4937E-01 CRITERION= .2849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 519
 *** TIME = .215381E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1459E-04 OSCILLATION LIMIT = 11.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4928E-01 CRITERION= .2845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 520
 *** TIME = .216170E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1480E-04 OSCILLATION LIMIT = 11.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4930E-01 CRITERION= .2845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 521
 *** TIME = .216959E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1458E-04 OSCILLATION LIMIT = 11.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4922E-01 CRITERION= .2842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 522
 *** TIME = .217747E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1479E-04 OSCILLATION LIMIT = 11.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4927E-01 CRITERION= .2842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 523
 *** TIME = .218536E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1457E-04 OSCILLATION LIMIT = 11.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4919E-01 CRITERION= .2838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 524
 *** TIME = .219325E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1478E-04 OSCILLATION LIMIT = 11.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.60 CRITERION= .2845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6786E-01
 HT FLOW CONVERGENCE VALUE= .4923E-01 CRITERION= .2838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 525
 *** TIME = .220114E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1456E-04 OSCILLATION LIMIT = 11.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.08 CRITERION= .2844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6770E-01
 HT FLOW CONVERGENCE VALUE= .4917E-01 CRITERION= .2835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 526
 *** TIME = .220903E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1477E-04 OSCILLATION LIMIT = 11.65

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:15:52 JUN 17, 1995 CP= 28394.030
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6173E-01
 HT FLOW CONVERGENCE VALUE= .4457E-01 CRITERION= .2835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 527
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1547E-04 OSCILLATION LIMIT = 12.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4450E-01 CRITERION= .2831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 528
 *** TIME = .222481E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1559E-04 OSCILLATION LIMIT = 12.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6173E-01
 HT FLOW CONVERGENCE VALUE= .4459E-01 CRITERION= .2831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 529
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1514E-04 OSCILLATION LIMIT = 11.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4448E-01 CRITERION= .2828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 530
 *** TIME = .224059E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1558E-04 OSCILLATION LIMIT = 12.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6173E-01
 HT FLOW CONVERGENCE VALUE= .4455E-01 CRITERION= .2828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 531
 *** TIME = .224848E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1515E-04 OSCILLATION LIMIT = 11.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4444E-01 CRITERION= .2825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 532
 *** TIME = .225637E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1555E-04 OSCILLATION LIMIT = 12.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4450E-01 CRITERION= .2825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 533
 *** TIME = .226426E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1516E-04 OSCILLATION LIMIT = 11.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4441E-01 CRITERION= .2822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 534
 *** TIME = .227215E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1552E-04 OSCILLATION LIMIT = 12.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4447E-01 CRITERION= .2821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 535
 *** TIME = .228004E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4437E-01 CRITERION= .2818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 536
*** TIME = .228793E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1549E-04 OSCILLATION LIMIT = 12.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2824
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
HT FLOW CONVERGENCE VALUE= .4440E-01 CRITERION= .2818 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 537
*** TIME = .229582E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4431E-01 CRITERION= .2815 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 12 COMPLETED. CUM ITER = 538
*** TIME = .230371E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1547E-04 OSCILLATION LIMIT = 12.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2820
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
HT FLOW CONVERGENCE VALUE= .4434E-01 CRITERION= .2815 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 13 COMPLETED. CUM ITER = 539
*** TIME = .231159E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2820
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4426E-01 CRITERION= .2812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 14 COMPLETED. CUM ITER = 540
*** TIME = .231948E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1546E-04 OSCILLATION LIMIT = 12.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2817
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
HT FLOW CONVERGENCE VALUE= .4429E-01 CRITERION= .2812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 15 COMPLETED. CUM ITER = 541
*** TIME = .232737E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2817
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4420E-01 CRITERION= .2808 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 16 COMPLETED. CUM ITER = 542
*** TIME = .233526E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1544E-04 OSCILLATION LIMIT = 12.18
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
HT FLOW CONVERGENCE VALUE= .4422E-01 CRITERION= .2808 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 17 COMPLETED. CUM ITER = 543
*** TIME = .234315E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 11.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01

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HT FLOW CONVERGENCE VALUE= .4414E-01 CRITERION= .2805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 18 COMPLETED. CUM ITER = 544
 *** TIME = .235104E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1543E-04 OSCILLATION LIMIT = 12.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4415E-01 CRITERION= .2805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 545
 *** TIME = .235893E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1516E-04 OSCILLATION LIMIT = 11.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4408E-01 CRITERION= .2802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 546
 *** TIME = .236682E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1541E-04 OSCILLATION LIMIT = 12.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4409E-01 CRITERION= .2802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 547
 *** TIME = .237471E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1516E-04 OSCILLATION LIMIT = 11.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4402E-01 CRITERION= .2799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 548
 *** TIME = .238260E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1540E-04 OSCILLATION LIMIT = 12.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4403E-01 CRITERION= .2798 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 549
 *** TIME = .239049E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1515E-04 OSCILLATION LIMIT = 11.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4396E-01 CRITERION= .2795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 550
 *** TIME = .239838E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1539E-04 OSCILLATION LIMIT = 12.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6171E-01
 HT FLOW CONVERGENCE VALUE= .4397E-01 CRITERION= .2795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 551
 *** TIME = .240627E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1514E-04 OSCILLATION LIMIT = 11.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4390E-01 CRITERION= .2792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 552
 *** TIME = .241416E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1538E-04 OSCILLATION LIMIT = 12.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4391E-01 CRITERION= .2792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 553
 *** TIME = .242205E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1514E-04 OSCILLATION LIMIT = 11.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4385E-01 CRITERION= .2789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 554
 *** TIME = .242994E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1536E-04 OSCILLATION LIMIT = 12.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4385E-01 CRITERION= .2789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 555
 *** TIME = .243782E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1513E-04 OSCILLATION LIMIT = 11.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4379E-01 CRITERION= .2785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 556
 *** TIME = .244571E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1535E-04 OSCILLATION LIMIT = 12.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6172E-01
 HT FLOW CONVERGENCE VALUE= .4379E-01 CRITERION= .2785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 557
 *** TIME = .245360E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1512E-04 OSCILLATION LIMIT = 11.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
 HT FLOW CONVERGENCE VALUE= .4374E-01 CRITERION= .2782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 558
 *** TIME = .246149E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1534E-04 OSCILLATION LIMIT = 12.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6171E-01
 HT FLOW CONVERGENCE VALUE= .4373E-01 CRITERION= .2782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 559
 *** TIME = .246938E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1512E-04 OSCILLATION LIMIT = 11.93

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2787
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4368E-01 CRITERION= .2779 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 560
*** TIME = .247727E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1533E-04 OSCILLATION LIMIT = 12.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.85 CRITERION= .2784
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6171E-01
HT FLOW CONVERGENCE VALUE= .4367E-01 CRITERION= .2779 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 561
*** TIME = .248516E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1511E-04 OSCILLATION LIMIT = 11.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2784
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4363E-01 CRITERION= .2776 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 562
*** TIME = .249305E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1532E-04 OSCILLATION LIMIT = 12.09
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.84 CRITERION= .2781
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6171E-01
HT FLOW CONVERGENCE VALUE= .4362E-01 CRITERION= .2775 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 563
*** TIME = .250094E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1510E-04 OSCILLATION LIMIT = 11.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2781
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4357E-01 CRITERION= .2772 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 564
*** TIME = .250883E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1531E-04 OSCILLATION LIMIT = 12.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.84 CRITERION= .2778
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6171E-01
HT FLOW CONVERGENCE VALUE= .4356E-01 CRITERION= .2772 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 565
*** TIME = .251672E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1509E-04 OSCILLATION LIMIT = 11.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .2778
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6154E-01
HT FLOW CONVERGENCE VALUE= .4352E-01 CRITERION= .2769 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 566
*** TIME = .252461E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1531E-04 OSCILLATION LIMIT = 12.07

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM - REVISION 5.0A *****
38303: VERSION=HP 9000/7XX 13:52:50 JUN 17, 1995 CP= 30586.000
FOR SUPPORT CALL ROBERT BAHNEY. PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3823E-01
 HT FLOW CONVERGENCE VALUE= .2514E-01 CRITERION= .2769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 567
 *** TIME = .253250E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3344E-04 OSCILLATION LIMIT = 26.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2496E-01 CRITERION= .2766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 568
 *** TIME = .254039E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3434E-04 OSCILLATION LIMIT = 27.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3822E-01
 HT FLOW CONVERGENCE VALUE= .2519E-01 CRITERION= .2766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 569
 *** TIME = .254828E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3067E-04 OSCILLATION LIMIT = 24.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2495E-01 CRITERION= .2763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 570
 *** TIME = .255617E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3416E-04 OSCILLATION LIMIT = 26.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3822E-01
 HT FLOW CONVERGENCE VALUE= .2514E-01 CRITERION= .2763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 571
 *** TIME = .256406E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3099E-04 OSCILLATION LIMIT = 24.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2494E-01 CRITERION= .2760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 572
 *** TIME = .257194E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3386E-04 OSCILLATION LIMIT = 26.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3822E-01
 HT FLOW CONVERGENCE VALUE= .2510E-01 CRITERION= .2760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 573
 *** TIME = .257983E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3123E-04 OSCILLATION LIMIT = 24.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2493E-01 CRITERION= .2757 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 574
*** TIME = .258772E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3364E-04 OSCILLATION LIMIT = 26.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2759
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3822E-01
HT FLOW CONVERGENCE VALUE= .2506E-01 CRITERION= .2757 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 575
*** TIME = .259561E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3141E-04 OSCILLATION LIMIT = 24.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2759
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2491E-01 CRITERION= .2754 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 576
*** TIME = .260350E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3346E-04 OSCILLATION LIMIT = 26.40
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2756
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3822E-01
HT FLOW CONVERGENCE VALUE= .2502E-01 CRITERION= .2754 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 577
*** TIME = .261139E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3155E-04 OSCILLATION LIMIT = 24.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2756
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2489E-01 CRITERION= .2751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 578
*** TIME = .261928E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3332E-04 OSCILLATION LIMIT = 26.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2753
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2498E-01 CRITERION= .2751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 579
*** TIME = .262717E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3166E-04 OSCILLATION LIMIT = 24.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2753
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2486E-01 CRITERION= .2748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 580
*** TIME = .263506E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3321E-04 OSCILLATION LIMIT = 26.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2494E-01 CRITERION= .2748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 581
*** TIME = .264295E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3173E-04 OSCILLATION LIMIT = 25.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2750

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .2744 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 582
*** TIME = .265084E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3313E-04 OSCILLATION LIMIT = 26.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2747
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2491E-01 CRITERION= .2745 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 583
*** TIME = .265873E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3179E-04 OSCILLATION LIMIT = 25.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2746
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2481E-01 CRITERION= .2741 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 584
*** TIME = .266662E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3306E-04 OSCILLATION LIMIT = 26.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2744
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2487E-01 CRITERION= .2741 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 585
*** TIME = .267451E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3183E-04 OSCILLATION LIMIT = 25.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2743
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2479E-01 CRITERION= .2738 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 586
*** TIME = .268240E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3301E-04 OSCILLATION LIMIT = 26.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2740
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .2738 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 587
*** TIME = .269029E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3187E-04 OSCILLATION LIMIT = 25.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2740
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2476E-01 CRITERION= .2735 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 588
*** TIME = .269818E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3297E-04 OSCILLATION LIMIT = 26.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2737
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
HT FLOW CONVERGENCE VALUE= .2481E-01 CRITERION= .2735 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 589
*** TIME = .270606E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3189E-04 OSCILLATION LIMIT = 25.16
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2737
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2473E-01 CRITERION= .2732 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 590
 *** TIME = .271395E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3293E-04 OSCILLATION LIMIT = 25.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2734
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
 HT FLOW CONVERGENCE VALUE= .2477E-01 CRITERION= .2732 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 591
 *** TIME = .272184E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3190E-04 OSCILLATION LIMIT = 25.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2734
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2470E-01 CRITERION= .2729 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 592
 *** TIME = .272973E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3290E-04 OSCILLATION LIMIT = 25.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2731
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3821E-01
 HT FLOW CONVERGENCE VALUE= .2474E-01 CRITERION= .2729 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 593
 *** TIME = .273762E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3192E-04 OSCILLATION LIMIT = 25.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2731
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2468E-01 CRITERION= .2726 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 594
 *** TIME = .274551E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3287E-04 OSCILLATION LIMIT = 25.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3820E-01
 HT FLOW CONVERGENCE VALUE= .2471E-01 CRITERION= .2726 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 595
 *** TIME = .275340E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3192E-04 OSCILLATION LIMIT = 25.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
 HT FLOW CONVERGENCE VALUE= .2465E-01 CRITERION= .2723 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 596
 *** TIME = .276129E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3285E-04 OSCILLATION LIMIT = 25.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.01 CRITERION= .2725
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3820E-01
 HT FLOW CONVERGENCE VALUE= .2468E-01 CRITERION= .2723 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 597
 *** TIME = .276918E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .3193E-04  OSCILLATION LIMIT = 25.19
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 10.50      CRITERION= .2725
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3804E-01
  HT FLOW CONVERGENCE VALUE= .2462E-01  CRITERION= .2720    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  32 COMPLETED.  CUM ITER =  598
*** TIME = .277707E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3283E-04  OSCILLATION LIMIT = 25.90
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.01      CRITERION= .2722
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3820E-01
  HT FLOW CONVERGENCE VALUE= .2465E-01  CRITERION= .2720    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  33 COMPLETED.  CUM ITER =  599
*** TIME = .278496E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3193E-04  OSCILLATION LIMIT = 25.19
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 10.50      CRITERION= .2722
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3804E-01
  HT FLOW CONVERGENCE VALUE= .2459E-01  CRITERION= .2717    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  34 COMPLETED.  CUM ITER =  600
*** TIME = .279285E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3281E-04  OSCILLATION LIMIT = 25.89
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.01      CRITERION= .2719
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3820E-01
  HT FLOW CONVERGENCE VALUE= .2462E-01  CRITERION= .2717    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  35 COMPLETED.  CUM ITER =  601
*** TIME = .280074E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3193E-04  OSCILLATION LIMIT = 25.19
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 10.50      CRITERION= .2719
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3804E-01
  HT FLOW CONVERGENCE VALUE= .2456E-01  CRITERION= .2714    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  36 COMPLETED.  CUM ITER =  602
*** TIME = .280863E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3280E-04  OSCILLATION LIMIT = 25.88
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.01      CRITERION= .2716
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3820E-01
  HT FLOW CONVERGENCE VALUE= .2458E-01  CRITERION= .2714    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  37 COMPLETED.  CUM ITER =  603
*** TIME = .281652E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3193E-04  OSCILLATION LIMIT = 25.19
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 10.50      CRITERION= .2716
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3804E-01
  HT FLOW CONVERGENCE VALUE= .2454E-01  CRITERION= .2711    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  21  SUBSTEP  38 COMPLETED.  CUM ITER =  604
*** TIME = .282441E+09  TIME INC =  788940.
*** RESPONSE EIGENVALUE = .3278E-04  OSCILLATION LIMIT = 25.87
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 11.01      CRITERION= .2713
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .3820E-01
  HT FLOW CONVERGENCE VALUE= .2455E-01  CRITERION= .2711    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1

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*** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 605
*** TIME = .283229E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3193E-04 OSCILLATION LIMIT = 25.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.50 CRITERION= .2713
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3804E-01
HT FLOW CONVERGENCE VALUE= .2451E-01 CRITERION= .2708 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 606
*** TIME = .284018E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3277E-04 OSCILLATION LIMIT = 25.85
Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09

TIME= .31558E+09

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 152.19 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 153.05 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 155.02 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 32777.230 TIME= 14:29:46
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 14:29:46 JUN 17, 1995 CP= 32777.230
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF.

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
 TIME AT END OF THE LOAD STEP.31558E+09
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 10
 MAXIMUM NUMBER OF SUBSTEPS 40
 MINIMUM NUMBER OF SUBSTEPS 5
 START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
 STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS
 THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2710
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
 HT FLOW CONVERGENCE VALUE= .2312E-01 CRITERION= .2708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 607
 *** TIME = .284807E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2737E-04 OSCILLATION LIMIT = 21.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.757 CRITERION= .2710
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2313E-01 CRITERION= .2705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 608
 *** TIME = .285596E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2760E-04 OSCILLATION LIMIT = 21.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2707
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
 HT FLOW CONVERGENCE VALUE= .2312E-01 CRITERION= .2705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 609
 *** TIME = .286385E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2742E-04 OSCILLATION LIMIT = 21.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.757 CRITERION= .2707
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2310E-01 CRITERION= .2703 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 610
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2767E-04 OSCILLATION LIMIT = 21.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2704
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
 HT FLOW CONVERGENCE VALUE= .2310E-01 CRITERION= .2703 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 611
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2735E-04 OSCILLATION LIMIT = 21.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.757 CRITERION= .2705


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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2308E-01 CRITERION= .2700 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 612
*** TIME = .288752E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2772E-04 OSCILLATION LIMIT = 21.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2702
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
HT FLOW CONVERGENCE VALUE= .2307E-01 CRITERION= .2700 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 613
*** TIME = .289541E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2730E-04 OSCILLATION LIMIT = 21.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.757 CRITERION= .2702
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2305E-01 CRITERION= .2697 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 614
*** TIME = .290330E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2775E-04 OSCILLATION LIMIT = 21.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2699
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
HT FLOW CONVERGENCE VALUE= .2305E-01 CRITERION= .2698 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 615
*** TIME = .291119E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2725E-04 OSCILLATION LIMIT = 21.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.757 CRITERION= .2699
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2303E-01 CRITERION= .2695 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 616
*** TIME = .291908E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2777E-04 OSCILLATION LIMIT = 21.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2697
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
HT FLOW CONVERGENCE VALUE= .2303E-01 CRITERION= .2695 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 617
*** TIME = .292697E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2722E-04 OSCILLATION LIMIT = 21.47
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2697
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2300E-01 CRITERION= .2692 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 618
*** TIME = .293486E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2779E-04 OSCILLATION LIMIT = 21.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2694
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
HT FLOW CONVERGENCE VALUE= .2300E-01 CRITERION= .2693 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 619
*** TIME = .294275E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2719E-04 OSCILLATION LIMIT = 21.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2694
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2298E-01 CRITERION= .2690 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 620
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2780E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2692
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3565E-01
 HT FLOW CONVERGENCE VALUE= .2298E-01 CRITERION= .2690 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 621
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2717E-04 OSCILLATION LIMIT = 21.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2692
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2295E-01 CRITERION= .2687 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 622
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2780E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2689
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2295E-01 CRITERION= .2687 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 623
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2715E-04 OSCILLATION LIMIT = 21.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2689
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2293E-01 CRITERION= .2685 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 624
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2780E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2687
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2293E-01 CRITERION= .2685 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 625
 *** TIME = .299008E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2714E-04 OSCILLATION LIMIT = 21.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2687
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2291E-01 CRITERION= .2682 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 20 COMPLETED. CUM ITER = 626
 *** TIME = .299797E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2780E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2684
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2291E-01 CRITERION= .2682 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 21 COMPLETED. CUM ITER = 627
 *** TIME = .300586E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2712E-04 OSCILLATION LIMIT = 21.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2684
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2289E-01 CRITERION= .2680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 22 COMPLETED. CUM ITER = 628
 *** TIME = .301375E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2780E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.27 CRITERION= .2681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2288E-01 CRITERION= .2680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 23 COMPLETED. CUM ITER = 629
 *** TIME = .302164E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2711E-04 OSCILLATION LIMIT = 21.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2682
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2286E-01 CRITERION= .2677 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 24 COMPLETED. CUM ITER = 630
 *** TIME = .302953E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2779E-04 OSCILLATION LIMIT = 21.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2679
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2286E-01 CRITERION= .2677 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 25 COMPLETED. CUM ITER = 631
 *** TIME = .303742E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2710E-04 OSCILLATION LIMIT = 21.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2679
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2284E-01 CRITERION= .2674 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 26 COMPLETED. CUM ITER = 632
 *** TIME = .304531E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2778E-04 OSCILLATION LIMIT = 21.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2676
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2283E-01 CRITERION= .2675 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 633
 *** TIME = .305320E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2710E-04 OSCILLATION LIMIT = 21.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2676
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2282E-01 CRITERION= .2672 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 634
 *** TIME = .306109E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2778E-04 OSCILLATION LIMIT = 21.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2281E-01 CRITERION= .2672 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 635
*** TIME = .306898E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2709E-04 OSCILLATION LIMIT = 21.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2674
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2280E-01 CRITERION= .2669 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 636
*** TIME = .307687E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2777E-04 OSCILLATION LIMIT = 21.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2671
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
HT FLOW CONVERGENCE VALUE= .2279E-01 CRITERION= .2670 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 31 COMPLETED. CUM ITER = 637
*** TIME = .308476E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2708E-04 OSCILLATION LIMIT = 21.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2671
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2278E-01 CRITERION= .2667 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 32 COMPLETED. CUM ITER = 638
*** TIME = .309265E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2776E-04 OSCILLATION LIMIT = 21.90
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2669
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
HT FLOW CONVERGENCE VALUE= .2276E-01 CRITERION= .2667 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 33 COMPLETED. CUM ITER = 639
*** TIME = .310053E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2707E-04 OSCILLATION LIMIT = 21.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2669
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2275E-01 CRITERION= .2664 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 34 COMPLETED. CUM ITER = 640
*** TIME = .310842E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2775E-04 OSCILLATION LIMIT = 21.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2666
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
HT FLOW CONVERGENCE VALUE= .2274E-01 CRITERION= .2664 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 35 COMPLETED. CUM ITER = 641
*** TIME = .311631E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2707E-04 OSCILLATION LIMIT = 21.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2666
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
HT FLOW CONVERGENCE VALUE= .2273E-01 CRITERION= .2662 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 36 COMPLETED. CUM ITER = 642
*** TIME = .312420E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2774E-04 OSCILLATION LIMIT = 21.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2663
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01

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HT FLOW CONVERGENCE VALUE= .2272E-01 CRITERION= .2662 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 37 COMPLETED. CUM ITER = 643
 *** TIME = .313209E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2706E-04 OSCILLATION LIMIT = 21.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.758 CRITERION= .2664
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2271E-01 CRITERION= .2659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 644
 *** TIME = .313998E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2773E-04 OSCILLATION LIMIT = 21.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.26 CRITERION= .2661
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3563E-01
 HT FLOW CONVERGENCE VALUE= .2269E-01 CRITERION= .2659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 645
 *** TIME = .314787E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2705E-04 OSCILLATION LIMIT = 21.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.759 CRITERION= .2661
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3546E-01
 HT FLOW CONVERGENCE VALUE= .2269E-01 CRITERION= .2656 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 646
 *** TIME = .315576E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2772E-04 OSCILLATION LIMIT = 21.87

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:06:45 JUN 17, 1995 CP= 34969.560
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 51.95 CRITERION= .2706
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2884
 HT FLOW CONVERGENCE VALUE= .1134 CRITERION= .2646 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 647
 *** TIME = .323465E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5220E-04 OSCILLATION LIMIT = 411.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.45 CRITERION= .2696
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2779
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .2633 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 648
 *** TIME = .331355E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5242E-04 OSCILLATION LIMIT = 413.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.95 CRITERION= .2683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2759
 HT FLOW CONVERGENCE VALUE= .1123 CRITERION= .2623 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 649
 *** TIME = .339244E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5205E-04 OSCILLATION LIMIT = 410.6

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.44 CRITERION= .2672
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2780
HT FLOW CONVERGENCE VALUE= .1119 CRITERION= .2610 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 650
*** TIME = .347134E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5238E-04 OSCILLATION LIMIT = 413.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.95 CRITERION= .2660
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2761
HT FLOW CONVERGENCE VALUE= .1113 CRITERION= .2599 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 651
*** TIME = .355023E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5204E-04 OSCILLATION LIMIT = 410.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.44 CRITERION= .2649
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2781
HT FLOW CONVERGENCE VALUE= .1108 CRITERION= .2586 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 652
*** TIME = .362912E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5237E-04 OSCILLATION LIMIT = 413.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.95 CRITERION= .2637
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2763
HT FLOW CONVERGENCE VALUE= .1102 CRITERION= .2576 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 653
*** TIME = .370802E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5203E-04 OSCILLATION LIMIT = 410.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.44 CRITERION= .2626
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2783
HT FLOW CONVERGENCE VALUE= .1098 CRITERION= .2562 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 654
*** TIME = .378691E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5235E-04 OSCILLATION LIMIT = 413.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.94 CRITERION= .2613
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2766
HT FLOW CONVERGENCE VALUE= .1092 CRITERION= .2552 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 655
*** TIME = .386581E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5203E-04 OSCILLATION LIMIT = 410.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.43 CRITERION= .2603
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2784
HT FLOW CONVERGENCE VALUE= .1087 CRITERION= .2539 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 656
*** TIME = .394470E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5234E-04 OSCILLATION LIMIT = 413.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.94 CRITERION= .2590
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2768
HT FLOW CONVERGENCE VALUE= .1081 CRITERION= .2528 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 657

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*** TIME = .402359E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5202E-04    OSCILLATION LIMIT = 410.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.43    CRITERION= .2580
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2787
    HT FLOW CONVERGENCE VALUE= .1076    CRITERION= .2515    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 658
*** TIME = .410249E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5233E-04    OSCILLATION LIMIT = 412.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.94    CRITERION= .2567
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2771
    HT FLOW CONVERGENCE VALUE= .1071    CRITERION= .2505    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 659
*** TIME = .418138E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5201E-04    OSCILLATION LIMIT = 410.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.43    CRITERION= .2557
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2788
    HT FLOW CONVERGENCE VALUE= .1066    CRITERION= .2491    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 660
*** TIME = .426028E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5232E-04    OSCILLATION LIMIT = 412.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.94    CRITERION= .2544
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2773
    HT FLOW CONVERGENCE VALUE= .1060    CRITERION= .2481    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 661
*** TIME = .433917E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5200E-04    OSCILLATION LIMIT = 410.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.43    CRITERION= .2534
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2790
    HT FLOW CONVERGENCE VALUE= .1055    CRITERION= .2468    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 662
*** TIME = .441806E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5231E-04    OSCILLATION LIMIT = 412.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.93    CRITERION= .2521
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2775
    HT FLOW CONVERGENCE VALUE= .1050    CRITERION= .2458    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 17 COMPLETED. CUM ITER = 663
*** TIME = .449696E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5199E-04    OSCILLATION LIMIT = 410.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.42    CRITERION= .2510
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2791
    HT FLOW CONVERGENCE VALUE= .1045    CRITERION= .2444    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 18 COMPLETED. CUM ITER = 664
*** TIME = .457585E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5230E-04    OSCILLATION LIMIT = 412.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.93    CRITERION= .2498
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2777
    HT FLOW CONVERGENCE VALUE= .1039    CRITERION= .2434    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 19 COMPLETED. CUM ITER = 665
*** TIME = .465475E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5198E-04 OSCILLATION LIMIT = 410.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.42 CRITERION= .2487
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2793
HT FLOW CONVERGENCE VALUE= .1034 CRITERION= .2421 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 20 COMPLETED. CUM ITER = 666
*** TIME = .473364E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5229E-04 OSCILLATION LIMIT = 412.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.93 CRITERION= .2475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2779
HT FLOW CONVERGENCE VALUE= .1029 CRITERION= .2410 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 21 COMPLETED. CUM ITER = 667
*** TIME = .481253E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5198E-04 OSCILLATION LIMIT = 410.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.42 CRITERION= .2464
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2795
HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .2397 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 22 COMPLETED. CUM ITER = 668
*** TIME = .489143E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5227E-04 OSCILLATION LIMIT = 412.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.92 CRITERION= .2452
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2782
HT FLOW CONVERGENCE VALUE= .1018 CRITERION= .2387 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 23 COMPLETED. CUM ITER = 669
*** TIME = .497032E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5197E-04 OSCILLATION LIMIT = 410.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.42 CRITERION= .2441
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2797
HT FLOW CONVERGENCE VALUE= .1013 CRITERION= .2373 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 670
*** TIME = .504922E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5226E-04 OSCILLATION LIMIT = 412.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.92 CRITERION= .2429
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2785
HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .2363 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 671
*** TIME = .512811E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5196E-04 OSCILLATION LIMIT = 409.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.41 CRITERION= .2418
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2799
HT FLOW CONVERGENCE VALUE= .1003 CRITERION= .2350 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 672
*** TIME = .520700E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5225E-04 OSCILLATION LIMIT = 412.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.92 CRITERION= .2406

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2787
 HT FLOW CONVERGENCE VALUE= .9946E-01 CRITERION= .2340 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 673
 *** TIME = .528590E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5195E-04 OSCILLATION LIMIT = 409.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.41 CRITERION= .2395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2801
 HT FLOW CONVERGENCE VALUE= .9886E-01 CRITERION= .2326 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 674
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5224E-04 OSCILLATION LIMIT = 412.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.92 CRITERION= .2382
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2789
 HT FLOW CONVERGENCE VALUE= .9832E-01 CRITERION= .2316 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 675
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5194E-04 OSCILLATION LIMIT = 409.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.41 CRITERION= .2372
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2803
 HT FLOW CONVERGENCE VALUE= .9783E-01 CRITERION= .2303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 676
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5223E-04 OSCILLATION LIMIT = 412.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .2359
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2791
 HT FLOW CONVERGENCE VALUE= .9728E-01 CRITERION= .2292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 677
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5193E-04 OSCILLATION LIMIT = 409.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .2349
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2805
 HT FLOW CONVERGENCE VALUE= .9680E-01 CRITERION= .2279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 678
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5222E-04 OSCILLATION LIMIT = 412.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .2336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2794
 HT FLOW CONVERGENCE VALUE= .9626E-01 CRITERION= .2269 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 679
 *** TIME = .575926E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5192E-04 OSCILLATION LIMIT = 409.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .2326
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2807
 HT FLOW CONVERGENCE VALUE= .9577E-01 CRITERION= .2255 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 680
 *** TIME = .583816E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5221E-04 OSCILLATION LIMIT = 411.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .2313
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2796
 HT FLOW CONVERGENCE VALUE= .9521E-01 CRITERION= .2245 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 681
 *** TIME = .591705E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5191E-04 OSCILLATION LIMIT = 409.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .2303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2808
 HT FLOW CONVERGENCE VALUE= .9471E-01 CRITERION= .2232 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 682
 *** TIME = .599594E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5220E-04 OSCILLATION LIMIT = 411.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.91 CRITERION= .2290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2798
 HT FLOW CONVERGENCE VALUE= .9416E-01 CRITERION= .2222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 683
 *** TIME = .607484E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5191E-04 OSCILLATION LIMIT = 409.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .2280
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2810
 HT FLOW CONVERGENCE VALUE= .9367E-01 CRITERION= .2208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 684
 *** TIME = .615373E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5219E-04 OSCILLATION LIMIT = 411.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.90 CRITERION= .2267
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2800
 HT FLOW CONVERGENCE VALUE= .9313E-01 CRITERION= .2198 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 685
 *** TIME = .623263E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5190E-04 OSCILLATION LIMIT = 409.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.39 CRITERION= .2257
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2811
 HT FLOW CONVERGENCE VALUE= .9264E-01 CRITERION= .2185 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 686
 *** TIME = .631152E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5217E-04 OSCILLATION LIMIT = 411.6

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:43:41 JUN 17, 1995 CP= 37159.760
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .2199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2502
 HT FLOW CONVERGENCE VALUE= .5438E-01 CRITERION= .2177 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 687
 *** TIME = .639041E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .5575E-04 OSCILLATION LIMIT = 439.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.51 CRITERION= .2192
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2473
 HT FLOW CONVERGENCE VALUE= .5336E-01 CRITERION= .2167 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 688
 *** TIME = .646931E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5618E-04 OSCILLATION LIMIT = 443.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .2182
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2468
 HT FLOW CONVERGENCE VALUE= .5301E-01 CRITERION= .2160 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 689
 *** TIME = .654820E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5599E-04 OSCILLATION LIMIT = 441.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.51 CRITERION= .2174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2479
 HT FLOW CONVERGENCE VALUE= .5289E-01 CRITERION= .2149 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 690
 *** TIME = .662710E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5617E-04 OSCILLATION LIMIT = 443.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .2164
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2470
 HT FLOW CONVERGENCE VALUE= .5253E-01 CRITERION= .2142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 691
 *** TIME = .670599E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5598E-04 OSCILLATION LIMIT = 441.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.51 CRITERION= .2157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2481
 HT FLOW CONVERGENCE VALUE= .5246E-01 CRITERION= .2132 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 692
 *** TIME = .678488E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5616E-04 OSCILLATION LIMIT = 443.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .2147
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2472
 HT FLOW CONVERGENCE VALUE= .5211E-01 CRITERION= .2125 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 693
 *** TIME = .686378E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5597E-04 OSCILLATION LIMIT = 441.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.51 CRITERION= .2139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2483
 HT FLOW CONVERGENCE VALUE= .5203E-01 CRITERION= .2114 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 694
 *** TIME = .694267E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5615E-04 OSCILLATION LIMIT = 443.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2474
 HT FLOW CONVERGENCE VALUE= .5167E-01 CRITERION= .2107 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 695
*** TIME = .702157E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5596E-04 OSCILLATION LIMIT = 441.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2122
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2484
HT FLOW CONVERGENCE VALUE= .5159E-01 CRITERION= .2097 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 696
*** TIME = .710046E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5614E-04 OSCILLATION LIMIT = 442.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2112
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2476
HT FLOW CONVERGENCE VALUE= .5125E-01 CRITERION= .2089 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 697
*** TIME = .717935E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5595E-04 OSCILLATION LIMIT = 441.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2105
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2486
HT FLOW CONVERGENCE VALUE= .5115E-01 CRITERION= .2079 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 698
*** TIME = .725825E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5613E-04 OSCILLATION LIMIT = 442.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2095
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2478
HT FLOW CONVERGENCE VALUE= .5082E-01 CRITERION= .2072 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 699
*** TIME = .733714E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5594E-04 OSCILLATION LIMIT = 441.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2087
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2488
HT FLOW CONVERGENCE VALUE= .5074E-01 CRITERION= .2062 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 700
*** TIME = .741604E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5612E-04 OSCILLATION LIMIT = 442.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2077
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2481
HT FLOW CONVERGENCE VALUE= .5041E-01 CRITERION= .2054 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 701
*** TIME = .749493E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5594E-04 OSCILLATION LIMIT = 441.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2070
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2490
HT FLOW CONVERGENCE VALUE= .5032E-01 CRITERION= .2044 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 702
*** TIME = .757382E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5612E-04 OSCILLATION LIMIT = 442.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2060
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2482

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HT FLOW CONVERGENCE VALUE= .4999E-01 CRITERION= .2037 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 703
 *** TIME = .765272E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5593E-04 OSCILLATION LIMIT = 441.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2491
 HT FLOW CONVERGENCE VALUE= .4988E-01 CRITERION= .2026 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 704
 *** TIME = .773161E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5611E-04 OSCILLATION LIMIT = 442.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2484
 HT FLOW CONVERGENCE VALUE= .4954E-01 CRITERION= .2019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 705
 *** TIME = .781051E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5592E-04 OSCILLATION LIMIT = 441.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2493
 HT FLOW CONVERGENCE VALUE= .4942E-01 CRITERION= .2009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 706
 *** TIME = .788940E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5610E-04 OSCILLATION LIMIT = 442.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2487
 HT FLOW CONVERGENCE VALUE= .4906E-01 CRITERION= .2002 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 707
 *** TIME = .796829E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5591E-04 OSCILLATION LIMIT = 441.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2495
 HT FLOW CONVERGENCE VALUE= .4894E-01 CRITERION= .1991 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 708
 *** TIME = .804719E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5609E-04 OSCILLATION LIMIT = 442.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .2007
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2489
 HT FLOW CONVERGENCE VALUE= .4860E-01 CRITERION= .1984 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 709
 *** TIME = .812608E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5590E-04 OSCILLATION LIMIT = 441.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .2000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2497
 HT FLOW CONVERGENCE VALUE= .4846E-01 CRITERION= .1974 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 710
 *** TIME = .820498E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5608E-04 OSCILLATION LIMIT = 442.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1990
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2491
 HT FLOW CONVERGENCE VALUE= .4813E-01 CRITERION= .1966 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 711
 *** TIME = .828387E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5589E-04 OSCILLATION LIMIT = 441.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2499
 HT FLOW CONVERGENCE VALUE= .4796E-01 CRITERION= .1956 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 712
 *** TIME = .836276E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5608E-04 OSCILLATION LIMIT = 442.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1973
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2493
 HT FLOW CONVERGENCE VALUE= .4765E-01 CRITERION= .1949 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 713
 *** TIME = .844166E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5588E-04 OSCILLATION LIMIT = 440.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2500
 HT FLOW CONVERGENCE VALUE= .4755E-01 CRITERION= .1938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 714
 *** TIME = .852055E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5607E-04 OSCILLATION LIMIT = 442.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2495
 HT FLOW CONVERGENCE VALUE= .4724E-01 CRITERION= .1931 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 715
 *** TIME = .859945E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5588E-04 OSCILLATION LIMIT = 440.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1948
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2502
 HT FLOW CONVERGENCE VALUE= .4713E-01 CRITERION= .1921 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 716
 *** TIME = .867834E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5606E-04 OSCILLATION LIMIT = 442.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2497
 HT FLOW CONVERGENCE VALUE= .4683E-01 CRITERION= .1914 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 717
 *** TIME = .875723E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5587E-04 OSCILLATION LIMIT = 440.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2504
 HT FLOW CONVERGENCE VALUE= .4671E-01 CRITERION= .1903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 718
 *** TIME = .883613E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5605E-04 OSCILLATION LIMIT = 442.2

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1920
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2499
HT FLOW CONVERGENCE VALUE= .4642E-01 CRITERION= .1896 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 719
*** TIME = .891502E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5586E-04 OSCILLATION LIMIT = 440.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1913
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2506
HT FLOW CONVERGENCE VALUE= .4629E-01 CRITERION= .1886 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 720
*** TIME = .899392E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5604E-04 OSCILLATION LIMIT = 442.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2502
HT FLOW CONVERGENCE VALUE= .4599E-01 CRITERION= .1879 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 721
*** TIME = .907281E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5585E-04 OSCILLATION LIMIT = 440.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1895
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2508
HT FLOW CONVERGENCE VALUE= .4586E-01 CRITERION= .1868 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 722
*** TIME = .915170E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5604E-04 OSCILLATION LIMIT = 442.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .1886
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2504
HT FLOW CONVERGENCE VALUE= .4557E-01 CRITERION= .1861 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 723
*** TIME = .923060E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5584E-04 OSCILLATION LIMIT = 440.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.50 CRITERION= .1878
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2510
HT FLOW CONVERGENCE VALUE= .4544E-01 CRITERION= .1851 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 724
*** TIME = .930949E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5603E-04 OSCILLATION LIMIT = 442.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.00 CRITERION= .1868
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2506
HT FLOW CONVERGENCE VALUE= .4516E-01 CRITERION= .1843 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 725
*** TIME = .938839E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5583E-04 OSCILLATION LIMIT = 440.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.49 CRITERION= .1861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2512
HT FLOW CONVERGENCE VALUE= .4502E-01 CRITERION= .1833 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 726

*** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5602E-04 OSCILLATION LIMIT = 442.0

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 16:20:37 JUN 17, 1995 CP= 39349.600
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 7.666 CRITERION= .1834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2288
 HT FLOW CONVERGENCE VALUE= .3455E-01 CRITERION= .1828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 727
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4337E-04 OSCILLATION LIMIT = 342.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2270
 HT FLOW CONVERGENCE VALUE= .3386E-01 CRITERION= .1820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 728
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4366E-04 OSCILLATION LIMIT = 344.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.666 CRITERION= .1821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2269
 HT FLOW CONVERGENCE VALUE= .3358E-01 CRITERION= .1815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 729
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4366E-04 OSCILLATION LIMIT = 344.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2274
 HT FLOW CONVERGENCE VALUE= .3365E-01 CRITERION= .1806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 730
 *** TIME = .978286E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4365E-04 OSCILLATION LIMIT = 344.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.666 CRITERION= .1808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2270
 HT FLOW CONVERGENCE VALUE= .3336E-01 CRITERION= .1801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 731
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4365E-04 OSCILLATION LIMIT = 344.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2276
 HT FLOW CONVERGENCE VALUE= .3343E-01 CRITERION= .1793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 732
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4364E-04 OSCILLATION LIMIT = 344.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.666 CRITERION= .1794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2272
 HT FLOW CONVERGENCE VALUE= .3313E-01 CRITERION= .1788 <<< CONVERGED


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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 733
*** TIME = .100195E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4363E-04 OSCILLATION LIMIT = 344.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1789
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2278
HT FLOW CONVERGENCE VALUE= .3320E-01 CRITERION= .1780 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 734
*** TIME = .100984E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4363E-04 OSCILLATION LIMIT = 344.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.666 CRITERION= .1781
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2275
HT FLOW CONVERGENCE VALUE= .3291E-01 CRITERION= .1775 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 735
*** TIME = .101773E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4362E-04 OSCILLATION LIMIT = 344.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1776
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2279
HT FLOW CONVERGENCE VALUE= .3296E-01 CRITERION= .1767 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 736
*** TIME = .102562E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4361E-04 OSCILLATION LIMIT = 344.1
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2277
HT FLOW CONVERGENCE VALUE= .3268E-01 CRITERION= .1761 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 737
*** TIME = .103351E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4361E-04 OSCILLATION LIMIT = 344.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1763
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2281
HT FLOW CONVERGENCE VALUE= .3273E-01 CRITERION= .1753 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 738
*** TIME = .104140E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4360E-04 OSCILLATION LIMIT = 344.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1754
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2279
HT FLOW CONVERGENCE VALUE= .3245E-01 CRITERION= .1748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 739
*** TIME = .104929E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4359E-04 OSCILLATION LIMIT = 343.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1749
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2283
HT FLOW CONVERGENCE VALUE= .3251E-01 CRITERION= .1740 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 740
*** TIME = .105718E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4359E-04 OSCILLATION LIMIT = 343.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1741

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2281
 HT FLOW CONVERGENCE VALUE= .3223E-01 CRITERION= .1735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 741
 *** TIME = .106507E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4358E-04 OSCILLATION LIMIT = 343.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1736
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2285
 HT FLOW CONVERGENCE VALUE= .3229E-01 CRITERION= .1727 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 742
 *** TIME = .107296E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4358E-04 OSCILLATION LIMIT = 343.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2283
 HT FLOW CONVERGENCE VALUE= .3202E-01 CRITERION= .1722 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 743
 *** TIME = .108085E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4357E-04 OSCILLATION LIMIT = 343.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1723
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2287
 HT FLOW CONVERGENCE VALUE= .3207E-01 CRITERION= .1713 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 744
 *** TIME = .108874E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4357E-04 OSCILLATION LIMIT = 343.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1715
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2285
 HT FLOW CONVERGENCE VALUE= .3182E-01 CRITERION= .1708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 745
 *** TIME = .109663E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4355E-04 OSCILLATION LIMIT = 343.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1709
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2289
 HT FLOW CONVERGENCE VALUE= .3189E-01 CRITERION= .1700 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 746
 *** TIME = .110452E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4355E-04 OSCILLATION LIMIT = 343.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2287
 HT FLOW CONVERGENCE VALUE= .3162E-01 CRITERION= .1695 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 747
 *** TIME = .111241E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4354E-04 OSCILLATION LIMIT = 343.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1696
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2291
 HT FLOW CONVERGENCE VALUE= .3166E-01 CRITERION= .1687 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 748
 *** TIME = .112029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4354E-04 OSCILLATION LIMIT = 343.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1688
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2289
 HT FLOW CONVERGENCE VALUE= .3140E-01 CRITERION= .1682 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 749
 *** TIME = .112818E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4353E-04 OSCILLATION LIMIT = 343.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2293
 HT FLOW CONVERGENCE VALUE= .3143E-01 CRITERION= .1673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 750
 *** TIME = .113607E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4353E-04 OSCILLATION LIMIT = 343.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1675
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2291
 HT FLOW CONVERGENCE VALUE= .3118E-01 CRITERION= .1668 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 751
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4351E-04 OSCILLATION LIMIT = 343.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2295
 HT FLOW CONVERGENCE VALUE= .3121E-01 CRITERION= .1660 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 752
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4352E-04 OSCILLATION LIMIT = 343.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1661
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2294
 HT FLOW CONVERGENCE VALUE= .3096E-01 CRITERION= .1655 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 753
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4350E-04 OSCILLATION LIMIT = 343.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1656
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2297
 HT FLOW CONVERGENCE VALUE= .3098E-01 CRITERION= .1647 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 754
 *** TIME = .116763E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4350E-04 OSCILLATION LIMIT = 343.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1648
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2296
 HT FLOW CONVERGENCE VALUE= .3072E-01 CRITERION= .1642 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 755
 *** TIME = .117552E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4349E-04 OSCILLATION LIMIT = 343.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1643
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2299
 HT FLOW CONVERGENCE VALUE= .3076E-01 CRITERION= .1634 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 756
 *** TIME = .118341E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .4349E-04 OSCILLATION LIMIT = 343.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1635
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2298
 HT FLOW CONVERGENCE VALUE= .3051E-01 CRITERION= .1628 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 757
 *** TIME = .119130E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4348E-04 OSCILLATION LIMIT = 343.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1630
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2301
 HT FLOW CONVERGENCE VALUE= .3053E-01 CRITERION= .1620 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 758
 *** TIME = .119919E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4348E-04 OSCILLATION LIMIT = 343.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1622
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2300
 HT FLOW CONVERGENCE VALUE= .3028E-01 CRITERION= .1615 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 759
 *** TIME = .120708E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4346E-04 OSCILLATION LIMIT = 342.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.157 CRITERION= .1616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2303
 HT FLOW CONVERGENCE VALUE= .3030E-01 CRITERION= .1607 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 760
 *** TIME = .121497E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4347E-04 OSCILLATION LIMIT = 342.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1608
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2302
 HT FLOW CONVERGENCE VALUE= .3006E-01 CRITERION= .1602 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 761
 *** TIME = .122286E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4345E-04 OSCILLATION LIMIT = 342.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.156 CRITERION= .1603
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2305
 HT FLOW CONVERGENCE VALUE= .3006E-01 CRITERION= .1594 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 762
 *** TIME = .123075E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4346E-04 OSCILLATION LIMIT = 342.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1595
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2304
 HT FLOW CONVERGENCE VALUE= .2982E-01 CRITERION= .1589 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 763
 *** TIME = .123864E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4344E-04 OSCILLATION LIMIT = 342.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.156 CRITERION= .1590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2307
 HT FLOW CONVERGENCE VALUE= .2982E-01 CRITERION= .1580 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 764
 *** TIME = .124653E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4344E-04 OSCILLATION LIMIT = 342.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.665 CRITERION= .1582
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2306
 HT FLOW CONVERGENCE VALUE= .2958E-01 CRITERION= .1575 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 765
 *** TIME = .125441E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4342E-04 OSCILLATION LIMIT = 342.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.156 CRITERION= .1577
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2309
 HT FLOW CONVERGENCE VALUE= .2966E-01 CRITERION= .1567 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 40 COMPLETED. CUM ITER = 766
 *** TIME = .126230E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4343E-04 OSCILLATION LIMIT = 342.6

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 16:57:33 JUN 17, 1995 CP= 41540.410
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= .7334 CRITERION= .1567
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2091
 HT FLOW CONVERGENCE VALUE= .2985E-01 CRITERION= .1563 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 1 COMPLETED. CUM ITER = 767
 *** TIME = .127019E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3192E-04 OSCILLATION LIMIT = 251.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1563
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2089
 HT FLOW CONVERGENCE VALUE= .2964E-01 CRITERION= .1556 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 2 COMPLETED. CUM ITER = 768
 *** TIME = .127808E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3195E-04 OSCILLATION LIMIT = 252.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7336 CRITERION= .1556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2091
 HT FLOW CONVERGENCE VALUE= .2942E-01 CRITERION= .1552 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 3 COMPLETED. CUM ITER = 769
 *** TIME = .128597E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3199E-04 OSCILLATION LIMIT = 252.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2091
 HT FLOW CONVERGENCE VALUE= .2945E-01 CRITERION= .1545 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 4 COMPLETED. CUM ITER = 770
 *** TIME = .129386E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3194E-04 OSCILLATION LIMIT = 252.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7336 CRITERION= .1545
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2093

HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .1542 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 5 COMPLETED. CUM ITER = 771
 *** TIME = .130175E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3198E-04 OSCILLATION LIMIT = 252.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1541
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2093
 HT FLOW CONVERGENCE VALUE= .2925E-01 CRITERION= .1535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 772
 *** TIME = .130964E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3194E-04 OSCILLATION LIMIT = 252.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7337 CRITERION= .1534
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2095
 HT FLOW CONVERGENCE VALUE= .2903E-01 CRITERION= .1531 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 773
 *** TIME = .131753E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3197E-04 OSCILLATION LIMIT = 252.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1530
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2095
 HT FLOW CONVERGENCE VALUE= .2906E-01 CRITERION= .1524 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 774
 *** TIME = .132542E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3193E-04 OSCILLATION LIMIT = 251.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7337 CRITERION= .1523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2097
 HT FLOW CONVERGENCE VALUE= .2889E-01 CRITERION= .1520 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 775
 *** TIME = .133331E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3197E-04 OSCILLATION LIMIT = 252.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1520
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2096
 HT FLOW CONVERGENCE VALUE= .2892E-01 CRITERION= .1513 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 776
 *** TIME = .134120E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3193E-04 OSCILLATION LIMIT = 251.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7337 CRITERION= .1513
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2098
 HT FLOW CONVERGENCE VALUE= .2871E-01 CRITERION= .1509 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 777
 *** TIME = .134909E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3196E-04 OSCILLATION LIMIT = 252.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1509
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2098
 HT FLOW CONVERGENCE VALUE= .2873E-01 CRITERION= .1502 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 778
 *** TIME = .135698E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3192E-04 OSCILLATION LIMIT = 251.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7337 CRITERION= .1502
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2100
 HT FLOW CONVERGENCE VALUE= .2852E-01 CRITERION= .1498 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 779
 *** TIME = .136487E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3196E-04 OSCILLATION LIMIT = 252.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2100
 HT FLOW CONVERGENCE VALUE= .2855E-01 CRITERION= .1491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 780
 *** TIME = .137276E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3191E-04 OSCILLATION LIMIT = 251.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7338 CRITERION= .1491
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2102
 HT FLOW CONVERGENCE VALUE= .2834E-01 CRITERION= .1487 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 781
 *** TIME = .138065E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3195E-04 OSCILLATION LIMIT = 252.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1487
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2102
 HT FLOW CONVERGENCE VALUE= .2835E-01 CRITERION= .1480 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 782
 *** TIME = .138853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3191E-04 OSCILLATION LIMIT = 251.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7338 CRITERION= .1480
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2104
 HT FLOW CONVERGENCE VALUE= .2814E-01 CRITERION= .1477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 783
 *** TIME = .139642E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3194E-04 OSCILLATION LIMIT = 252.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1476
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2103
 HT FLOW CONVERGENCE VALUE= .2829E-01 CRITERION= .1470 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 784
 *** TIME = .140431E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3190E-04 OSCILLATION LIMIT = 251.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7338 CRITERION= .1469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2106
 HT FLOW CONVERGENCE VALUE= .2810E-01 CRITERION= .1466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 785
 *** TIME = .141220E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3194E-04 OSCILLATION LIMIT = 252.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1466
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2105
 HT FLOW CONVERGENCE VALUE= .2820E-01 CRITERION= .1459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 786
 *** TIME = .142009E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3190E-04 OSCILLATION LIMIT = 251.6

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7338 CRITERION= .1459
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2107
 HT FLOW CONVERGENCE VALUE= .2804E-01 CRITERION= .1455 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 787
 *** TIME = .142798E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3193E-04 OSCILLATION LIMIT = 251.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1455
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2107
 HT FLOW CONVERGENCE VALUE= .2804E-01 CRITERION= .1448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 788
 *** TIME = .143587E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3189E-04 OSCILLATION LIMIT = 251.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7338 CRITERION= .1448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2109
 HT FLOW CONVERGENCE VALUE= .2784E-01 CRITERION= .1444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 789
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3193E-04 OSCILLATION LIMIT = 251.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1444
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2108
 HT FLOW CONVERGENCE VALUE= .2779E-01 CRITERION= .1437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 790
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3188E-04 OSCILLATION LIMIT = 251.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7339 CRITERION= .1437
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2111
 HT FLOW CONVERGENCE VALUE= .2760E-01 CRITERION= .1433 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 791
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3192E-04 OSCILLATION LIMIT = 251.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2110
 HT FLOW CONVERGENCE VALUE= .2759E-01 CRITERION= .1426 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 792
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3188E-04 OSCILLATION LIMIT = 251.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7339 CRITERION= .1426
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2113
 HT FLOW CONVERGENCE VALUE= .2739E-01 CRITERION= .1422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 793
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .3191E-04 OSCILLATION LIMIT = 251.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1422
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2112
 HT FLOW CONVERGENCE VALUE= .2738E-01 CRITERION= .1416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 794


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*** TIME = .148321E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3187E-04    OSCILLATION LIMIT = 251.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .7339    CRITERION= .1415
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2115
    HT FLOW CONVERGENCE VALUE= .2719E-01    CRITERION= .1412    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 795
*** TIME = .149110E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3191E-04    OSCILLATION LIMIT = 251.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.189    CRITERION= .1411
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2114
    HT FLOW CONVERGENCE VALUE= .2719E-01    CRITERION= .1405    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 796
*** TIME = .149899E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3187E-04    OSCILLATION LIMIT = 251.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .7339    CRITERION= .1404
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2117
    HT FLOW CONVERGENCE VALUE= .2701E-01    CRITERION= .1401    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 797
*** TIME = .150688E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3190E-04    OSCILLATION LIMIT = 251.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.189    CRITERION= .1401
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2116
    HT FLOW CONVERGENCE VALUE= .2699E-01    CRITERION= .1394    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 798
*** TIME = .151476E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3186E-04    OSCILLATION LIMIT = 251.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .7339    CRITERION= .1394
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2118
    HT FLOW CONVERGENCE VALUE= .2681E-01    CRITERION= .1390    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 799
*** TIME = .152265E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3190E-04    OSCILLATION LIMIT = 251.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.189    CRITERION= .1390
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2117
    HT FLOW CONVERGENCE VALUE= .2681E-01    CRITERION= .1383    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 800
*** TIME = .153054E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3185E-04    OSCILLATION LIMIT = 251.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .7340    CRITERION= .1383
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2120
    HT FLOW CONVERGENCE VALUE= .2665E-01    CRITERION= .1379    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 801
*** TIME = .153843E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3189E-04    OSCILLATION LIMIT = 251.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.189    CRITERION= .1379
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2119
    HT FLOW CONVERGENCE VALUE= .2668E-01    CRITERION= .1372    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 802
*** TIME = .154632E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3185E-04 OSCILLATION LIMIT = 251.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7340 CRITERION= .1372
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2122
HT FLOW CONVERGENCE VALUE= .2649E-01 CRITERION= .1368 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 803
*** TIME = .155421E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3188E-04 OSCILLATION LIMIT = 251.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1368
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2121
HT FLOW CONVERGENCE VALUE= .2648E-01 CRITERION= .1361 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 804
*** TIME = .156210E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3184E-04 OSCILLATION LIMIT = 251.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= .7340 CRITERION= .1361
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2124
HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .1358 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 805
*** TIME = .156999E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3188E-04 OSCILLATION LIMIT = 251.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.189 CRITERION= .1357
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2123
HT FLOW CONVERGENCE VALUE= .2629E-01 CRITERION= .1351 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 806
*** TIME = .157788E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .3184E-04 OSCILLATION LIMIT = 251.2

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 17:34:29 JUN 17, 1995 CP= 43730.840
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 5.270 CRITERION= .1351
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1794
HT FLOW CONVERGENCE VALUE= .2551E-01 CRITERION= .1348 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 807
*** TIME = .158577E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2355E-04 OSCILLATION LIMIT = 185.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1349
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1799
HT FLOW CONVERGENCE VALUE= .2542E-01 CRITERION= .1342 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 808
*** TIME = .159366E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.270 CRITERION= .1343

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1805
 HT FLOW CONVERGENCE VALUE= .2530E-01 CRITERION= .1339 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 809
 *** TIME = .160155E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1340
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1800
 HT FLOW CONVERGENCE VALUE= .2527E-01 CRITERION= .1334 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 810
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1335
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1807
 HT FLOW CONVERGENCE VALUE= .2514E-01 CRITERION= .1331 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 811
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1332
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1801
 HT FLOW CONVERGENCE VALUE= .2512E-01 CRITERION= .1325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 812
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1326
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1808
 HT FLOW CONVERGENCE VALUE= .2500E-01 CRITERION= .1323 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 813
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1324
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1803
 HT FLOW CONVERGENCE VALUE= .2497E-01 CRITERION= .1317 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 814
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1318
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1809
 HT FLOW CONVERGENCE VALUE= .2485E-01 CRITERION= .1314 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 815
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1315
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1804
 HT FLOW CONVERGENCE VALUE= .2483E-01 CRITERION= .1309 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 816
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1309
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1811
 HT FLOW CONVERGENCE VALUE= .2470E-01 CRITERION= .1306 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 817
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1805
 HT FLOW CONVERGENCE VALUE= .2467E-01 CRITERION= .1300 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 818.
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1301
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1812
 HT FLOW CONVERGENCE VALUE= .2455E-01 CRITERION= .1297 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 819
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1298
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1807
 HT FLOW CONVERGENCE VALUE= .2452E-01 CRITERION= .1292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 820
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1293
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1813
 HT FLOW CONVERGENCE VALUE= .2439E-01 CRITERION= .1289 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 821
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1808
 HT FLOW CONVERGENCE VALUE= .2436E-01 CRITERION= .1283 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 822
 *** TIME = .170411E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2354E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1284
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1815
 HT FLOW CONVERGENCE VALUE= .2423E-01 CRITERION= .1281 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 823
 *** TIME = .171200E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1809
 HT FLOW CONVERGENCE VALUE= .2417E-01 CRITERION= .1275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 824
 *** TIME = .171989E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1816
 HT FLOW CONVERGENCE VALUE= .2404E-01 CRITERION= .1272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 825
 *** TIME = .172778E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1273
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1811
 HT FLOW CONVERGENCE VALUE= .2400E-01 CRITERION= .1266 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 826
 *** TIME = .173567E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1267
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1817
 HT FLOW CONVERGENCE VALUE= .2387E-01 CRITERION= .1264 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 827
 *** TIME = .174356E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1812
 HT FLOW CONVERGENCE VALUE= .2382E-01 CRITERION= .1258 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 828
 *** TIME = .175145E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1259
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1819
 HT FLOW CONVERGENCE VALUE= .2370E-01 CRITERION= .1255 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 829
 *** TIME = .175934E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1256
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1813
 HT FLOW CONVERGENCE VALUE= .2366E-01 CRITERION= .1250 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 830
 *** TIME = .176723E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1251
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1820
 HT FLOW CONVERGENCE VALUE= .2353E-01 CRITERION= .1247 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 831
 *** TIME = .177512E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1248
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1815
 HT FLOW CONVERGENCE VALUE= .2349E-01 CRITERION= .1241 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 832
*** TIME = .178300E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1242
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1821
HT FLOW CONVERGENCE VALUE= .2335E-01 CRITERION= .1239 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 833
*** TIME = .179089E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1240
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1816
HT FLOW CONVERGENCE VALUE= .2330E-01 CRITERION= .1233 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 834
*** TIME = .179878E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1234
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1823
HT FLOW CONVERGENCE VALUE= .2317E-01 CRITERION= .1230 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 835
*** TIME = .180667E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1231
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1818
HT FLOW CONVERGENCE VALUE= .2311E-01 CRITERION= .1224 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 836
*** TIME = .181456E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1225
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1824
HT FLOW CONVERGENCE VALUE= .2298E-01 CRITERION= .1222 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 837
*** TIME = .182245E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1223
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1819
HT FLOW CONVERGENCE VALUE= .2293E-01 CRITERION= .1216 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 32 COMPLETED. CUM ITER = 838
*** TIME = .183034E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1217
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1826
HT FLOW CONVERGENCE VALUE= .2280E-01 CRITERION= .1213 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 33 COMPLETED. CUM ITER = 839
*** TIME = .183823E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1214
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1821

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HT FLOW CONVERGENCE VALUE= .2277E-01 CRITERION= .1208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 34 COMPLETED. CUM ITER = 840
 *** TIME = .184612E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1209
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1827
 HT FLOW CONVERGENCE VALUE= .2262E-01 CRITERION= .1205 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 35 COMPLETED. CUM ITER = 841
 *** TIME = .185401E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1206
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1822
 HT FLOW CONVERGENCE VALUE= .2254E-01 CRITERION= .1199 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 36 COMPLETED. CUM ITER = 842
 *** TIME = .186190E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.271 CRITERION= .1200
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1828
 HT FLOW CONVERGENCE VALUE= .2239E-01 CRITERION= .1197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 37 COMPLETED. CUM ITER = 843
 *** TIME = .186979E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1198
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1824
 HT FLOW CONVERGENCE VALUE= .2236E-01 CRITERION= .1191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 38 COMPLETED. CUM ITER = 844
 *** TIME = .187768E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.272 CRITERION= .1192
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1830
 HT FLOW CONVERGENCE VALUE= .2225E-01 CRITERION= .1188 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 845
 *** TIME = .188557E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2361E-04 OSCILLATION LIMIT = 186.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.782 CRITERION= .1189
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1825
 HT FLOW CONVERGENCE VALUE= .2223E-01 CRITERION= .1182 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 846
 *** TIME = .189346E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2353E-04 OSCILLATION LIMIT = 185.7

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:11:30 JUN 17, 1995 CP= 45924.850
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44-BWR UCF/Waste Package with 10-yr old; 49-GMD/NTU-SNF

HT FLOW CONVERGENCE VALUE= 6.463 CRITERION= .1184
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1536
 HT FLOW CONVERGENCE VALUE= .2018E-01 CRITERION= .1181 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 847
 *** TIME = .190135E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1988E-04 OSCILLATION LIMIT = 156.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1182
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1539
 HT FLOW CONVERGENCE VALUE= .2015E-01 CRITERION= .1176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 848
 *** TIME = .190923E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1984E-04 OSCILLATION LIMIT = 156.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.463 CRITERION= .1177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1549
 HT FLOW CONVERGENCE VALUE= .2009E-01 CRITERION= .1174 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 849
 *** TIME = .191712E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1176
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1540
 HT FLOW CONVERGENCE VALUE= .2005E-01 CRITERION= .1169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 850
 *** TIME = .192501E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1984E-04 OSCILLATION LIMIT = 156.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.463 CRITERION= .1171
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1550
 HT FLOW CONVERGENCE VALUE= .1997E-01 CRITERION= .1167 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 851
 *** TIME = .193290E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1541
 HT FLOW CONVERGENCE VALUE= .1993E-01 CRITERION= .1162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 852
 *** TIME = .194079E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1984E-04 OSCILLATION LIMIT = 156.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1164
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1550
 HT FLOW CONVERGENCE VALUE= .1987E-01 CRITERION= .1160 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 853
 *** TIME = .194868E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1542
 HT FLOW CONVERGENCE VALUE= .1983E-01 CRITERION= .1155 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 854
 *** TIME = .195657E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1985E-04 OSCILLATION LIMIT = 156.6

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1551
 HT FLOW CONVERGENCE VALUE= .1976E-01 CRITERION= .1153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 855
 *** TIME = .196446E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1543
 HT FLOW CONVERGENCE VALUE= .1972E-01 CRITERION= .1149 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 856
 *** TIME = .197235E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1985E-04 OSCILLATION LIMIT = 156.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1552
 HT FLOW CONVERGENCE VALUE= .1965E-01 CRITERION= .1147 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 857
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1149
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1544
 HT FLOW CONVERGENCE VALUE= .1961E-01 CRITERION= .1142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 858
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1985E-04 OSCILLATION LIMIT = 156.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1144
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1553
 HT FLOW CONVERGENCE VALUE= .1954E-01 CRITERION= .1140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 859
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1142
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1545
 HT FLOW CONVERGENCE VALUE= .1950E-01 CRITERION= .1135 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 860
 *** TIME = .200391E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1985E-04 OSCILLATION LIMIT = 156.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1554
 HT FLOW CONVERGENCE VALUE= .1943E-01 CRITERION= .1133 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 861
 *** TIME = .201180E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1546
 HT FLOW CONVERGENCE VALUE= .1939E-01 CRITERION= .1128 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 862

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*** TIME = .201969E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1985E-04    OSCILLATION LIMIT = 156.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.464    CRITERION= .1130
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1555
    HT FLOW CONVERGENCE VALUE= .1932E-01    CRITERION= .1126    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 863
*** TIME = .202758E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1996E-04    OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.974    CRITERION= .1128
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1547
    HT FLOW CONVERGENCE VALUE= .1928E-01    CRITERION= .1121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 864
*** TIME = .203547E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1985E-04    OSCILLATION LIMIT = 156.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.464    CRITERION= .1123
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1556
    HT FLOW CONVERGENCE VALUE= .1921E-01    CRITERION= .1120    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 865
*** TIME = .204335E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1996E-04    OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.974    CRITERION= .1122
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1548
    HT FLOW CONVERGENCE VALUE= .1917E-01    CRITERION= .1115    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 866
*** TIME = .205124E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04    OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.464    CRITERION= .1116
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1557
    HT FLOW CONVERGENCE VALUE= .1910E-01    CRITERION= .1113    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 867
*** TIME = .205913E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1996E-04    OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.974    CRITERION= .1115
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1549
    HT FLOW CONVERGENCE VALUE= .1906E-01    CRITERION= .1108    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 868
*** TIME = .206702E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04    OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.464    CRITERION= .1110
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1558
    HT FLOW CONVERGENCE VALUE= .1898E-01    CRITERION= .1106    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 869
*** TIME = .207491E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1996E-04    OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.974    CRITERION= .1108
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1550
    HT FLOW CONVERGENCE VALUE= .1895E-01    CRITERION= .1101    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 870
*** TIME = .208280E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1103
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1559
HT FLOW CONVERGENCE VALUE= .1888E-01 CRITERION= .1099 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 871
*** TIME = .209069E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1996E-04 OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1101
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1551
HT FLOW CONVERGENCE VALUE= .1884E-01 CRITERION= .1094 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 872
*** TIME = .209858E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1096
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1560
HT FLOW CONVERGENCE VALUE= .1877E-01 CRITERION= .1093 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 873
*** TIME = .210647E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1095
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1553
HT FLOW CONVERGENCE VALUE= .1873E-01 CRITERION= .1088 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 874
*** TIME = .211436E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1089
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1561
HT FLOW CONVERGENCE VALUE= .1866E-01 CRITERION= .1086 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 875
*** TIME = .212225E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1088
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1554
HT FLOW CONVERGENCE VALUE= .1862E-01 CRITERION= .1081 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 876
*** TIME = .213014E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 156.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .1083
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1562
HT FLOW CONVERGENCE VALUE= .1854E-01 CRITERION= .1079 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 877
*** TIME = .213803E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1081

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1555
 HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .1074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 878
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 156.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.465 CRITERION= .1076
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1563
 HT FLOW CONVERGENCE VALUE= .1843E-01 CRITERION= .1072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 879
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1556
 HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .1067 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 880
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1987E-04 OSCILLATION LIMIT = 156.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.465 CRITERION= .1069
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1564
 HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .1065 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 881
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1067
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1557
 HT FLOW CONVERGENCE VALUE= .1828E-01 CRITERION= .1061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 882
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1987E-04 OSCILLATION LIMIT = 156.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.465 CRITERION= .1062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1565
 HT FLOW CONVERGENCE VALUE= .1820E-01 CRITERION= .1059 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 883
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1558
 HT FLOW CONVERGENCE VALUE= .1817E-01 CRITERION= .1054 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 884
 *** TIME = .219325E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1987E-04 OSCILLATION LIMIT = 156.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.465 CRITERION= .1056
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1566
 HT FLOW CONVERGENCE VALUE= .1810E-01 CRITERION= .1052 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 885
 *** TIME = .220114E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1997E-04 OSCILLATION LIMIT = 157.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.974 CRITERION= .1054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1559
 HT FLOW CONVERGENCE VALUE= .1806E-01 CRITERION= .1047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 886
 *** TIME = .220903E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1987E-04 OSCILLATION LIMIT = 156.8

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:48:32 JUN 17, 1995 CP= 48119.170
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1053
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1458
 HT FLOW CONVERGENCE VALUE= .2051E-01 CRITERION= .1046 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 887
 *** TIME = .221692E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1449
 HT FLOW CONVERGENCE VALUE= .2043E-01 CRITERION= .1042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 888
 *** TIME = .222481E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1200E-04 OSCILLATION LIMIT = 94.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1047
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1458
 HT FLOW CONVERGENCE VALUE= .2035E-01 CRITERION= .1040 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 889
 *** TIME = .223270E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1210E-04 OSCILLATION LIMIT = 95.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1450
 HT FLOW CONVERGENCE VALUE= .2032E-01 CRITERION= .1036 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 890
 *** TIME = .224059E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1200E-04 OSCILLATION LIMIT = 94.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1459
 HT FLOW CONVERGENCE VALUE= .2024E-01 CRITERION= .1035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 891
 *** TIME = .224848E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1211E-04 OSCILLATION LIMIT = 95.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1451
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .1031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 892
 *** TIME = .225637E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .1201E-04 OSCILLATION LIMIT = 94.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1036
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1460
 HT FLOW CONVERGENCE VALUE= .2017E-01 CRITERION= .1029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 893
 *** TIME = .226426E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1211E-04 OSCILLATION LIMIT = 95.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1036
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1452
 HT FLOW CONVERGENCE VALUE= .2013E-01 CRITERION= .1025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 894
 *** TIME = .227215E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1201E-04 OSCILLATION LIMIT = 94.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1460
 HT FLOW CONVERGENCE VALUE= .2006E-01 CRITERION= .1024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 895
 *** TIME = .228004E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1211E-04 OSCILLATION LIMIT = 95.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1453
 HT FLOW CONVERGENCE VALUE= .2003E-01 CRITERION= .1020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 896
 *** TIME = .228793E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1202E-04 OSCILLATION LIMIT = 94.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1461
 HT FLOW CONVERGENCE VALUE= .1995E-01 CRITERION= .1018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 897
 *** TIME = .229582E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1211E-04 OSCILLATION LIMIT = 95.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1454
 HT FLOW CONVERGENCE VALUE= .1993E-01 CRITERION= .1014 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 898
 *** TIME = .230370E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1202E-04 OSCILLATION LIMIT = 94.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1020
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
 HT FLOW CONVERGENCE VALUE= .1986E-01 CRITERION= .1013 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 899
 *** TIME = .231159E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1455
 HT FLOW CONVERGENCE VALUE= .1983E-01 CRITERION= .1009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 900
 *** TIME = .231948E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1202E-04 OSCILLATION LIMIT = 94.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1015
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
 HT FLOW CONVERGENCE VALUE= .1975E-01 CRITERION= .1007 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 901
 *** TIME = .232737E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1456
 HT FLOW CONVERGENCE VALUE= .1972E-01 CRITERION= .1003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 902
 *** TIME = .233526E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1203E-04 OSCILLATION LIMIT = 94.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
 HT FLOW CONVERGENCE VALUE= .1964E-01 CRITERION= .1002 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 903
 *** TIME = .234315E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1212E-04 OSCILLATION LIMIT = 95.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1457
 HT FLOW CONVERGENCE VALUE= .1962E-01 CRITERION= .9977E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 904
 *** TIME = .235104E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1203E-04 OSCILLATION LIMIT = 94.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .1004
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
 HT FLOW CONVERGENCE VALUE= .1955E-01 CRITERION= .9965E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 905
 *** TIME = .235893E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .1003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1458
 HT FLOW CONVERGENCE VALUE= .1954E-01 CRITERION= .9922E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 906
 *** TIME = .236682E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1204E-04 OSCILLATION LIMIT = 94.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9984E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1946E-01 CRITERION= .9910E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 907
 *** TIME = .237471E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9975E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1459

HT FLOW CONVERGENCE VALUE= .1944E-01 CRITERION= .9867E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 908
 *** TIME = .238260E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1204E-04 OSCILLATION LIMIT = 94.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9929E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1936E-01 CRITERION= .9855E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 909
 *** TIME = .239049E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1213E-04 OSCILLATION LIMIT = 95.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9920E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1460
 HT FLOW CONVERGENCE VALUE= .1935E-01 CRITERION= .9813E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 910
 *** TIME = .239838E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1204E-04 OSCILLATION LIMIT = 95.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9875E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1928E-01 CRITERION= .9801E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 911
 *** TIME = .240627E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9866E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1460
 HT FLOW CONVERGENCE VALUE= .1926E-01 CRITERION= .9758E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 912
 *** TIME = .241416E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1205E-04 OSCILLATION LIMIT = 95.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9820E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1919E-01 CRITERION= .9746E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 913
 *** TIME = .242205E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9811E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1461
 HT FLOW CONVERGENCE VALUE= .1918E-01 CRITERION= .9703E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 914
 *** TIME = .242994E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1205E-04 OSCILLATION LIMIT = 95.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9766E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1469
 HT FLOW CONVERGENCE VALUE= .1910E-01 CRITERION= .9691E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 915
 *** TIME = .243782E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9757E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
 HT FLOW CONVERGENCE VALUE= .1908E-01 CRITERION= .9648E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 916
 *** TIME = .244571E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1205E-04 OSCILLATION LIMIT = 95.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9711E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1470
 HT FLOW CONVERGENCE VALUE= .1900E-01 CRITERION= .9636E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 917
 *** TIME = .245360E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9702E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
 HT FLOW CONVERGENCE VALUE= .1898E-01 CRITERION= .9593E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 918
 *** TIME = .246149E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1206E-04 OSCILLATION LIMIT = 95.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9657E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1471
 HT FLOW CONVERGENCE VALUE= .1890E-01 CRITERION= .9581E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 919
 *** TIME = .246938E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9648E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
 HT FLOW CONVERGENCE VALUE= .1887E-01 CRITERION= .9539E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 920
 *** TIME = .247727E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1206E-04 OSCILLATION LIMIT = 95.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9603E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1472
 HT FLOW CONVERGENCE VALUE= .1879E-01 CRITERION= .9526E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 921
 *** TIME = .248516E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9593E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
 HT FLOW CONVERGENCE VALUE= .1876E-01 CRITERION= .9484E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 922
 *** TIME = .249305E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1206E-04 OSCILLATION LIMIT = 95.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9548E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1473
 HT FLOW CONVERGENCE VALUE= .1867E-01 CRITERION= .9472E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 923
 *** TIME = .250094E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.88

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9539E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1864E-01 CRITERION= .9429E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 924
 *** TIME = .250883E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1207E-04 OSCILLATION LIMIT = 95.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.07 CRITERION= .9494E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1474
 HT FLOW CONVERGENCE VALUE= .1857E-01 CRITERION= .9417E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 925
 *** TIME = .251672E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.58 CRITERION= .9485E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1854E-01 CRITERION= .9374E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 926
 *** TIME = .252461E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1207E-04 OSCILLATION LIMIT = 95.23

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:25:37 JUN 17, 1995 CP= 50315.140
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.116 CRITERION= .9418E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1156
 HT FLOW CONVERGENCE VALUE= .1488E-01 CRITERION= .9368E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 927
 *** TIME = .253250E+10 TIME INC = .788940E+07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.624 CRITERION= .9415E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1159
 HT FLOW CONVERGENCE VALUE= .1488E-01 CRITERION= .9331E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 928
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+08 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 27.85 CRITERION= .9738E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3603
 HT FLOW CONVERGENCE VALUE= .4468E-01 CRITERION= .9283E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 929
 *** TIME = .256406E+10 TIME INC = .236682E+08
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+08 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 75.21 CRITERION= .1193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9573
 HT FLOW CONVERGENCE VALUE= .1168 CRITERION= .9097E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4152E-01
 HT FLOW CONVERGENCE VALUE= .1873E-02 CRITERION= .9096E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 931
 *** TIME = .262717E+10 TIME INC = .631152E+08

*** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 74.71 CRITERION= .1177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9762
 HT FLOW CONVERGENCE VALUE= .1154 CRITERION= .8941E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4134E-01
 HT FLOW CONVERGENCE VALUE= .1822E-02 CRITERION= .8940E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 933
 *** TIME = .269029E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 75.22 CRITERION= .1167
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9762
 HT FLOW CONVERGENCE VALUE= .1133 CRITERION= .8755E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4071E-01
 HT FLOW CONVERGENCE VALUE= .1764E-02 CRITERION= .8754E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 935
 *** TIME = .275340E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 74.71 CRITERION= .1151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.9782
 HT FLOW CONVERGENCE VALUE= .1115 CRITERION= .8599E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4009E-01
 HT FLOW CONVERGENCE VALUE= .1717E-02 CRITERION= .8598E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 937
 *** TIME = .281652E+10 TIME INC = .631152E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+08 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= 28.37 CRITERION= .9047E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3671
 HT FLOW CONVERGENCE VALUE= .4178E-01 CRITERION= .8519E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 938
 *** TIME = .284018E+10 TIME INC = .236682E+08
 Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM FROM .31558E+10 TO .31558E+11 BY .31558E+10
 TIME= .31558E+10

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11.
 LOAD LABELS = TEMP
 VALUES = 158.87 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 159.18 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 159.84 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 50863.550 TIME= 19:34:52
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 19:34:52 JUN 17, 1995 CP= 50863.560
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 31
TIME AT END OF THE LOAD STEP.31558E+10
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 24.42 CRITERION= .8863E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3123
HT FLOW CONVERGENCE VALUE= .3633E-01 CRITERION= .8477E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 1 COMPLETED. CUM ITER = 939
*** TIME = .286385E+10 TIME INC = .236682E+08
*** AUTO STEP TIME: NEXT TIME INC = .23668E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.93 CRITERION= .8829E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3132
HT FLOW CONVERGENCE VALUE= .3614E-01 CRITERION= .8404E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 2 COMPLETED. CUM ITER = 940
*** TIME = .288752E+10 TIME INC = .236682E+08
*** AUTO TIME STEP: NEXT TIME INC = .63115E+08 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 65.55 CRITERION= .1066
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8591
HT FLOW CONVERGENCE VALUE= .9525E-01 CRITERION= .8267E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3410E-01

HT FLOW CONVERGENCE VALUE= .1413E-02 CRITERION= .8266E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 31 SUBSTEP 3 COMPLETED. CUM ITER = 942
 *** TIME = .295064E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.06 CRITERION= .1057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8721
 HT FLOW CONVERGENCE VALUE= .9402E-01 CRITERION= .8099E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3387E-01
 HT FLOW CONVERGENCE VALUE= .1368E-02 CRITERION= .8098E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 31 SUBSTEP 4 COMPLETED. CUM ITER = 944
 *** TIME = .301375E+10 TIME INC = .631152E+08
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.56 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8742
 HT FLOW CONVERGENCE VALUE= .9224E-01 CRITERION= .7961E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3333E-01
 HT FLOW CONVERGENCE VALUE= .1319E-02 CRITERION= .7960E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 946
 *** TIME = .307687E+10 TIME INC = .631152E+08
 *** AUTO TIME STEP: NEXT TIME INC = .39447E+08 DECREASED (FACTOR = .6250)

HT FLOW CONVERGENCE VALUE= 41.39 CRITERION= .8961E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5461
 HT FLOW CONVERGENCE VALUE= .5711E-01 CRITERION= .7849E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 947
 *** TIME = .311631E+10 TIME INC = .394470E+08
 *** AUTO STEP TIME: NEXT TIME INC = .39447E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.88 CRITERION= .8851E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5266
 HT FLOW CONVERGENCE VALUE= .5594E-01 CRITERION= .7769E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 948
 *** TIME = .315576E+10 TIME INC = .394470E+08

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:42:47 JUN 17, 1995 CP= 51331.120
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 49.36 CRITERION= .9193E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4985
 HT FLOW CONVERGENCE VALUE= .5853E-01 CRITERION= .7671E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 949
 *** TIME = .323465E+10 TIME INC = .788940E+08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.85 CRITERION= .9097E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4996
 HT FLOW CONVERGENCE VALUE= .5789E-01 CRITERION= .7603E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 950
 *** TIME = .331355E+10 TIME INC = .788940E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 147.6 CRITERION= .1658

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.538
HT FLOW CONVERGENCE VALUE= .1687 CRITERION= .7341E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5757E-01
HT FLOW CONVERGENCE VALUE= .2273E-02 CRITERION= .7340E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 952
*** TIME = .355023E+10 TIME INC = .236682E+09
*** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 147.1 CRITERION= .1644
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.561
HT FLOW CONVERGENCE VALUE= .1635 CRITERION= .7109E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5627E-01
HT FLOW CONVERGENCE VALUE= .2139E-02 CRITERION= .7107E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 954
*** TIME = .378691E+10 TIME INC = .236682E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 393.1 CRITERION= .3993
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.167
HT FLOW CONVERGENCE VALUE= .3922 CRITERION= .6434E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
HT FLOW CONVERGENCE VALUE= .4574E-02 CRITERION= .6430E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 956
*** TIME = .441806E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 392.7 CRITERION= .3980
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.187
HT FLOW CONVERGENCE VALUE= .3541 CRITERION= .5787E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1209
HT FLOW CONVERGENCE VALUE= .3760E-02 CRITERION= .5783E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 958
*** TIME = .504922E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 393.3 CRITERION= .3974
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.205
HT FLOW CONVERGENCE VALUE= .3162 CRITERION= .5108E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1070
HT FLOW CONVERGENCE VALUE= .2973E-02 CRITERION= .5105E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 960
*** TIME = .568037E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 392.9 CRITERION= .3963
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.223
HT FLOW CONVERGENCE VALUE= .2766 CRITERION= .4458E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9436E-01
HT FLOW CONVERGENCE VALUE= .2272E-02 CRITERION= .4456E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 962
*** TIME = .631152E+10 TIME INC = .631152E+09

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 19:52:54 JUN 17, 1995 CP= 51931.400
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 243.6 CRITERION= .2475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.787

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HT FLOW CONVERGENCE VALUE= .1397 CRITERION= .4223E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4324E-01
 HT FLOW CONVERGENCE VALUE= .1166E-02 CRITERION= .4223E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 964
 *** TIME = .694267E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 243.1 CRITERION= .2468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.789
 HT FLOW CONVERGENCE VALUE= .1328 CRITERION= .4021E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4129E-01
 HT FLOW CONVERGENCE VALUE= .1057E-02 CRITERION= .4020E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 966
 *** TIME = .757382E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 243.6 CRITERION= .2468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.792
 HT FLOW CONVERGENCE VALUE= .1259 CRITERION= .3788E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3933E-01
 HT FLOW CONVERGENCE VALUE= .9516E-03 CRITERION= .3787E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 968
 *** TIME = .820498E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 243.2 CRITERION= .2462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.795
 HT FLOW CONVERGENCE VALUE= .1190 CRITERION= .3585E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3733E-01
 HT FLOW CONVERGENCE VALUE= .8513E-03 CRITERION= .3584E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 970
 *** TIME = .883613E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 243.7 CRITERION= .2462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.798
 HT FLOW CONVERGENCE VALUE= .1117 CRITERION= .3351E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3532E-01
 HT FLOW CONVERGENCE VALUE= .7567E-03 CRITERION= .3351E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 972
 *** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:59:50 JUN 17, 1995 CP= 52342.040
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 139.3 CRITERION= .1434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.018
 HT FLOW CONVERGENCE VALUE= .6054E-01 CRITERION= .3244E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1956E-01
 HT FLOW CONVERGENCE VALUE= .4106E-03 CRITERION= .3244E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 974
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.8 CRITERION= .1434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.019
 HT FLOW CONVERGENCE VALUE= .5799E-01 CRITERION= .3107E-01

EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1890E-01
 HT FLOW CONVERGENCE VALUE= .3818E-03 CRITERION= .3107E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 976
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.3 CRITERION= .1428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.020
 HT FLOW CONVERGENCE VALUE= .5403E-01 CRITERION= .3000E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1824E-01
 HT FLOW CONVERGENCE VALUE= .3494E-03 CRITERION= .3000E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 978
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.8 CRITERION= .1428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.021
 HT FLOW CONVERGENCE VALUE= .5012E-01 CRITERION= .2863E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1760E-01
 HT FLOW CONVERGENCE VALUE= .3234E-03 CRITERION= .2863E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 980
 *** TIME = .119919E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 139.3 CRITERION= .1423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.022
 HT FLOW CONVERGENCE VALUE= .4781E-01 CRITERION= .2756E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1696E-01
 HT FLOW CONVERGENCE VALUE= .2983E-03 CRITERION= .2756E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 982
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:06:45 JUN 17, 1995 CP= 52751.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 114.3 CRITERION= .1174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7411
 HT FLOW CONVERGENCE VALUE= .3629E-01 CRITERION= .2662E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1252E-01
 HT FLOW CONVERGENCE VALUE= .2238E-03 CRITERION= .2662E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 984
 *** TIME = .132542E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 113.8 CRITERION= .1170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7417
 HT FLOW CONVERGENCE VALUE= .3512E-01 CRITERION= .2599E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1221E-01
 HT FLOW CONVERGENCE VALUE= .2106E-03 CRITERION= .2599E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 986
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 114.3 CRITERION= .1171
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7420
 HT FLOW CONVERGENCE VALUE= .3383E-01 CRITERION= .2505E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1189E-01

HT FLOW CONVERGENCE VALUE= .1965E-03 CRITERION= .2505E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 988
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 113.8 CRITERION= .1166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7427
 HT FLOW CONVERGENCE VALUE= .3257E-01 CRITERION= .2442E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1157E-01
 HT FLOW CONVERGENCE VALUE= .1841E-03 CRITERION= .2442E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 990
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 114.3 CRITERION= .1167
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7430
 HT FLOW CONVERGENCE VALUE= .3125E-01 CRITERION= .2348E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1125E-01
 HT FLOW CONVERGENCE VALUE= .1697E-03 CRITERION= .2348E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 992
 *** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:13:40 JUN 17, 1995 CP= 53162.290
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 125.7 CRITERION= .1280
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7068
 HT FLOW CONVERGENCE VALUE= .3181E-01 CRITERION= .2302E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1104E-01
 HT FLOW CONVERGENCE VALUE= .1687E-03 CRITERION= .2302E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 994
 *** TIME = .164100E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 126.2 CRITERION= .1282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7070
 HT FLOW CONVERGENCE VALUE= .3076E-01 CRITERION= .2226E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1075E-01
 HT FLOW CONVERGENCE VALUE= .1578E-03 CRITERION= .2226E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 996
 *** TIME = .170411E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 125.7 CRITERION= .1278
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7076
 HT FLOW CONVERGENCE VALUE= .2982E-01 CRITERION= .2181E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1045E-01
 HT FLOW CONVERGENCE VALUE= .1480E-03 CRITERION= .2181E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 998
 *** TIME = .176723E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 126.2 CRITERION= .1280
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7077
 HT FLOW CONVERGENCE VALUE= .2900E-01 CRITERION= .2105E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1018E-01
 HT FLOW CONVERGENCE VALUE= .1383E-03 CRITERION= .2105E-01 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 1000
*** TIME = .183034E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 125.7 CRITERION= .1276
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7083
HT FLOW CONVERGENCE VALUE= .2808E-01 CRITERION= .2059E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9890E-02
HT FLOW CONVERGENCE VALUE= .1278E-03 CRITERION= .2059E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 1002
*** TIME = .189346E+11 TIME INC = .631152E+09
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:20:35 JUN 17, 1995 CP= 53572.470
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 112.3 CRITERION= .1141
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5932
HT FLOW CONVERGENCE VALUE= .2402E-01 CRITERION= .1998E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8265E-02
HT FLOW CONVERGENCE VALUE= .1063E-03 CRITERION= .1998E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 1004
*** TIME = .195657E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 111.8 CRITERION= .1137
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5936
HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .1967E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8041E-02
HT FLOW CONVERGENCE VALUE= .1009E-03 CRITERION= .1967E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1006
*** TIME = .201969E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 112.3 CRITERION= .1139
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5937
HT FLOW CONVERGENCE VALUE= .2291E-01 CRITERION= .1906E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7894E-02
HT FLOW CONVERGENCE VALUE= .9624E-04 CRITERION= .1906E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1008
*** TIME = .208280E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 111.8 CRITERION= .1136
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5941
HT FLOW CONVERGENCE VALUE= .2236E-01 CRITERION= .1875E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7723E-02
HT FLOW CONVERGENCE VALUE= .9196E-04 CRITERION= .1875E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1010
*** TIME = .214592E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 112.3 CRITERION= .1138
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5942
HT FLOW CONVERGENCE VALUE= .2185E-01 CRITERION= .1814E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7551E-02
HT FLOW CONVERGENCE VALUE= .8765E-04 CRITERION= .1814E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
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*** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1012
 *** TIME = .220903E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:27:31 JUN 17, 1995 CP= 53983.030
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 98.24 CRITERION= .1000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158
 HT FLOW CONVERGENCE VALUE= .1874E-01 CRITERION= .1790E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6461E-02
 HT FLOW CONVERGENCE VALUE= .7388E-04 CRITERION= .1790E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1014
 *** TIME = .227215E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 98.74 CRITERION= .1002
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158
 HT FLOW CONVERGENCE VALUE= .1836E-01 CRITERION= .1736E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6334E-02
 HT FLOW CONVERGENCE VALUE= .7080E-04 CRITERION= .1736E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1016
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 98.24 CRITERION= .9988E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5162
 HT FLOW CONVERGENCE VALUE= .1795E-01 CRITERION= .1712E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6203E-02
 HT FLOW CONVERGENCE VALUE= .6787E-04 CRITERION= .1712E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1018
 *** TIME = .239838E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 98.74 CRITERION= .1001
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5162
 HT FLOW CONVERGENCE VALUE= .1757E-01 CRITERION= .1658E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6075E-02
 HT FLOW CONVERGENCE VALUE= .6490E-04 CRITERION= .1658E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1020
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 98.24 CRITERION= .9975E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5166
 HT FLOW CONVERGENCE VALUE= .1716E-01 CRITERION= .1634E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5944E-02
 HT FLOW CONVERGENCE VALUE= .6208E-04 CRITERION= .1634E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1022
 *** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:34:28 JUN 17, 1995 CP= 54393.350
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 88.47 CRITERION= .8984E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4452
 HT FLOW CONVERGENCE VALUE= .1497E-01 CRITERION= .1588E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1023
 *** TIME = .258772E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 87.97 CRITERION= .8951E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4404
 HT FLOW CONVERGENCE VALUE= .1464E-01 CRITERION= .1572E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1024
 *** TIME = .265084E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.47 CRITERION= .8973E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4405
 HT FLOW CONVERGENCE VALUE= .1438E-01 CRITERION= .1526E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1025
 *** TIME = .271395E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 87.97 CRITERION= .8940E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4409
 HT FLOW CONVERGENCE VALUE= .1408E-01 CRITERION= .1510E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1026
 *** TIME = .277707E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.47 CRITERION= .8962E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4410
 HT FLOW CONVERGENCE VALUE= .1382E-01 CRITERION= .1464E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1027
 *** TIME = .284018E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:39:11 JUN 17, 1995 CP= 54672.760
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 76.51 CRITERION= .7802E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3758
 HT FLOW CONVERGENCE VALUE= .1176E-01 CRITERION= .1454E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1028
 *** TIME = .290330E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 77.01 CRITERION= .7824E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3765
 HT FLOW CONVERGENCE VALUE= .1158E-01 CRITERION= .1413E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1029
 *** TIME = .296641E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.51 CRITERION= .7792E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3768
 HT FLOW CONVERGENCE VALUE= .1136E-01 CRITERION= .1403E-01 <<< CONVERGED

```
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1030
*** TIME = .302953E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 77.01 CRITERION= .7815E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3768
HT FLOW CONVERGENCE VALUE= .1118E-01 CRITERION= .1363E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1031
*** TIME = .309264E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.51 CRITERION= .7783E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3771
HT FLOW CONVERGENCE VALUE= .1096E-01 CRITERION= .1352E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1032
*** TIME = .315576E+11 TIME INC = .631152E+09
```

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 54950.240

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44b.db
FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:44:03 JUN 17, 1995 CP= 54955.970
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
```

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

```
SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
2 NSOL 1136 TEMP peakclad 140.3 .3156E+11 246.8 .2525E+09
```

*GET TMTMAX FROM VARI 2 ITEM=EXTR TMAX VALUE= 252460832.

***** ROUTINE COMPLETED ***** CP = 54956.220

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```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:44:03 JUN 17, 1995 CP= 54956.250
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****
Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .25246E+09

SET COMMAND GOT LOAD STEP= 20 SUBSTEP= 40 CUMULATIVE ITERATION= 566
TIME/FREQUENCY= .25246E+09

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (8.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at Time of Peak Temp. (8.000001 years)

*** WARNING *** CP= 54985.140 TIME= 20:44:35
The selected element set contains mixed materials.
This could invalidate error estimation.
Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 646
TIME/FREQUENCY= .31558E+09

TITLE=
44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 150.12 BY .87012 TO 260.63

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=

44 BWR UCF/WP at 10 years

*** WARNING *** CP= 55022.700 TIME= 20:45:13
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 806
TIME/FREQUENCY= .15779E+10

TITLE=
44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 150.12 BY .87012 TO 260.63

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 55059.630 TIME= 20:45:50
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 7 CUMULATIVE ITERATION= 948
TIME/FREQUENCY= .31558E+10

TITLE=
44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 150.12 BY .87012 TO 260.63

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 55095.920 TIME= 20:46:26
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP= 55104.620

Set some needed variable values:

PARAMETER DATM = .9000000E-01
 PARAMETER DAT1 = .2500000
 PARAMETER DAT2 = .4100000
 PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
 Save profile from center to edge

Variable Legend: A01i000

c = center of assembly
 h = halfway between center and tube
 s = inside structural stainless tube layer
 t = stainless tube cladding
 g = tube guide
 i = inner barrier of DC
 o = outer barrier of DC
 ## = ID number of assembly (01 is center)
 i = side of assembly toward center of WP
 o = side of assembly toward edge of WP
 000 = profile center down
 045 = profile 45 deg down
 090 = profile center side
 135 = profile 45 deg up
 180 = profile center up

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:35 JUN 17, 1995 CP= 55104.630
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts1i000
 VARIABLE 3 IS AT NODE 1094 ITEM= TEMP COMP= NAME= t01i000
 VARIABLE 4 IS AT NODE 1101 ITEM= TEMP COMP= NAME= s01i000
 VARIABLE 5 IS AT NODE 1138 ITEM= TEMP COMP= NAME= h01i000
 VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i000
 VARIABLE 7 IS AT NODE 1134 ITEM= TEMP COMP= NAME= h01o000
 VARIABLE 8 IS AT NODE 1055 ITEM= TEMP COMP= NAME= s01o000
 VARIABLE 9 IS AT NODE 1047 ITEM= TEMP COMP= NAME= t01o000
 VARIABLE 10 IS AT NODE 1246 ITEM= TEMP COMP= NAME= s09i000

VARIABLE 11 IS AT NODE 1283 ITEM= TEMP COMP= NAME= h09i000
 VARIABLE 12 IS AT NODE 1281 ITEM= TEMP COMP= NAME= c09i000
 VARIABLE 13 IS AT NODE 1279 ITEM= TEMP COMP= NAME= h09o000
 VARIABLE 14 IS AT NODE 1200 ITEM= TEMP COMP= NAME= s09o000
 VARIABLE 15 IS AT NODE 1192 ITEM= TEMP COMP= NAME= t09o000
 VARIABLE 16 IS AT NODE 1391 ITEM= TEMP COMP= NAME= s15i000
 VARIABLE 17 IS AT NODE 1428 ITEM= TEMP COMP= NAME= h15i000
 VARIABLE 18 IS AT NODE 1426 ITEM= TEMP COMP= NAME= c15i000
 VARIABLE 19 IS AT NODE 1424 ITEM= TEMP COMP= NAME= h15o000
 VARIABLE 20 IS AT NODE 1345 ITEM= TEMP COMP= NAME= s15o000
 VARIABLE 21 IS AT NODE 1337 ITEM= TEMP COMP= NAME= t15o000
 VARIABLE 22 IS AT NODE 1536 ITEM= TEMP COMP= NAME= s21i000
 VARIABLE 23 IS AT NODE 1573 ITEM= TEMP COMP= NAME= h21i000
 VARIABLE 24 IS AT NODE 1571 ITEM= TEMP COMP= NAME= c21i000
 VARIABLE 25 IS AT NODE 1569 ITEM= TEMP COMP= NAME= h21o000
 VARIABLE 26 IS AT NODE 1490 ITEM= TEMP COMP= NAME= s21o000
 VARIABLE 27 IS AT NODE 1482 ITEM= TEMP COMP= NAME= t21o000
 VARIABLE 28 IS AT NODE 4217 ITEM= TEMP COMP= NAME= i21i000
 VARIABLE 29 IS AT NODE 4207 ITEM= TEMP COMP= NAME= i21o000
 VARIABLE 30 IS AT NODE 4437 ITEM= TEMP COMP= NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3544 TEMP	ts1i000	139.1	.3156E+11	228.8	.2525E+09
3 NSOL	1094 TEMP	t01i000	139.1	.3156E+11	228.8	.2525E+09
4 NSOL	1101 TEMP	s01i000	139.1	.3156E+11	228.9	.2525E+09
5 NSOL	1138 TEMP	h01i000	139.9	.3156E+11	240.6	.2525E+09
6 NSOL	1136 TEMP	c01i000	140.3	.3156E+11	246.8	.2525E+09
7 NSOL	1134 TEMP	h01o000	140.4	.3156E+11	249.0	.2209E+09
8 NSOL	1055 TEMP	s01o000	140.3	.3156E+11	247.1	.2525E+09
9 NSOL	1047 TEMP	t01o000	140.3	.3156E+11	247.0	.2525E+09
10 NSOL	1246 TEMP	s09i000	140.3	.3156E+11	247.1	.2525E+09
11 NSOL	1283 TEMP	h09i000	140.5	.3156E+11	250.7	.1578E+09
12 NSOL	1281 TEMP	c09i000	140.6	.3156E+11	250.4	.1578E+09
13 NSOL	1279 TEMP	h09o000	140.3	.3156E+11	246.6	.2525E+09
14 NSOL	1200 TEMP	s09o000	139.9	.3156E+11	239.2	.2525E+09
15 NSOL	1192 TEMP	t09o000	139.9	.3156E+11	239.2	.2525E+09
16 NSOL	1391 TEMP	s15i000	139.9	.3156E+11	239.1	.2525E+09
17 NSOL	1428 TEMP	h15i000	139.9	.3156E+11	237.7	.2525E+09
18 NSOL	1426 TEMP	c15i000	139.6	.3156E+11	232.5	.2525E+09
19 NSOL	1424 TEMP	h15o000	139.1	.3156E+11	223.9	.2525E+09
20 NSOL	1345 TEMP	s15o000	121.5	.1000E-05	211.5	.3156E+09
21 NSOL	1337 TEMP	t15o000	121.5	.1000E-05	211.4	.3156E+09
22 NSOL	1536 TEMP	s21i000	121.4	.1000E-05	211.4	.3156E+09
23 NSOL	1573 TEMP	h21i000	118.8	.1000E-05	208.6	.3156E+09
24 NSOL	1571 TEMP	c21i000	109.7	.1000E-05	202.3	.3156E+09
25 NSOL	1569 TEMP	h21o000	93.87	.1000E-05	192.4	.3156E+09

26 NSOL	1490 TEMP	s21o000	67.47	.1000E-05	179.8	.9467E+09
27 NSOL	1482 TEMP	t21o000	67.37	.1000E-05	179.8	.9467E+09
28 NSOL	4217 TEMP	i21i000	31.27	.1000E-05	168.2	.1262E+10
29 NSOL	4207 TEMP	i21o000	30.37	.1000E-05	167.8	.1262E+10
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	166.0	.1262E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:39 JUN 17, 1995 CP= 55108.500
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.233	177.244	177.346	194.720	203.735	206.781
31.558	177.233	177.244	177.346	194.720	203.735	206.780
.31558E+07	201.058	201.069	201.168	217.258	225.642	228.533
.63116E+07	205.880	205.891	205.989	221.811	230.071	232.921
.94673E+07	208.670	208.681	208.779	224.396	232.555	235.372
.12623E+08	210.689	210.700	210.796	226.258	234.340	237.129
.15779E+08	212.244	212.255	212.351	227.674	235.687	238.453
.18935E+08	213.496	213.506	213.602	228.803	236.756	239.501
.22090E+08	214.549	214.560	214.655	229.745	237.643	240.369
.25246E+08	215.455	215.466	215.560	230.549	238.395	241.103
.28402E+08	216.248	216.258	216.352	231.246	239.044	241.735
.31558E+08	216.955	216.965	217.059	231.862	239.615	242.291
.63115E+08	221.597	221.607	221.697	235.795	243.190	245.741
.94673E+08	224.266	224.276	224.363	237.913	245.029	247.481
.12623E+09	225.941	225.950	226.035	239.136	246.022	248.392
.15779E+09	227.153	227.162	227.244	239.971	246.664	248.966
.18935E+09	227.791	227.800	227.880	240.246	246.753	248.989
.22090E+09	228.328	228.337	228.414	240.470	246.816	248.995
.25246E+09	228.783	228.792	228.868	240.636	246.834	248.962
.28402E+09	228.483	228.492	228.566	240.088	246.158	248.239
.31558E+09	228.365	228.374	228.447	239.759	245.719	247.762
.63115E+09	222.078	222.085	222.145	231.641	236.651	238.357
.94673E+09	215.745	215.750	215.801	223.937	228.236	229.694
.12623E+10	209.337	209.342	209.386	216.488	220.244	221.511
.15779E+10	203.189	203.194	203.232	209.477	212.782	213.894
.18935E+10	197.743	197.747	197.780	203.347	206.294	207.283
.22090E+10	193.035	193.038	193.068	198.068	200.721	201.609
.25246E+10	188.416	188.419	188.446	192.983	195.392	196.198
.28402E+10	184.727	184.729	184.754	188.921	191.135	191.874
.31558E+10	181.437	181.440	181.462	185.291	187.326	188.005
.63115E+10	165.281	165.283	165.295	167.603	168.830	169.236
.94673E+10	157.968	157.970	157.979	159.761	160.708	161.020
.12623E+11	153.807	153.808	153.816	155.292	156.078	156.335
.15779E+11	150.709	150.709	150.716	151.994	152.674	152.897
.18935E+11	147.657	147.657	147.663	148.786	149.383	149.578
.22090E+11	145.057	145.058	145.063	146.067	146.601	146.775
.25246E+11	142.791	142.792	142.797	143.699	144.179	144.336
.28402E+11	140.815	140.815	140.820	141.640	142.076	142.218
.31558E+11	139.120	139.120	139.124	139.877	140.278	140.408

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:39 JUN 17, 1995 CP= 55108.510
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	203.892	203.890	203.905	209.494	209.556	204.791
31.558	203.892	203.890	203.905	209.494	209.556	204.791
.31558E+07	225.990	225.988	226.002	230.960	230.865	226.340
.63116E+07	230.421	230.419	230.432	235.274	235.142	230.644
.94673E+07	232.899	232.897	232.910	237.669	237.512	233.041
.12623E+08	234.682	234.679	234.693	239.385	239.213	234.765
.15779E+08	236.027	236.024	236.038	240.674	240.488	236.063
.18935E+08	237.092	237.090	237.103	241.692	241.496	237.091
.22090E+08	237.977	237.975	237.988	242.535	242.329	237.944
.25246E+08	238.726	238.723	238.736	243.246	243.032	238.666
.28402E+08	239.372	239.370	239.383	243.856	243.636	239.289
.31558E+08	239.941	239.938	239.951	244.392	244.166	239.836
.63115E+08	243.495	243.492	243.505	247.698	247.438	243.259
.94673E+08	245.314	245.311	245.323	249.333	249.056	245.004
.12623E+09	246.289	246.287	246.299	250.164	249.878	245.935
.15779E+09	246.917	246.915	246.926	250.673	250.382	246.533
.18935E+09	246.992	246.990	247.000	250.638	250.347	246.594
.22090E+09	247.043	247.041	247.051	250.595	250.305	246.635
.25246E+09	247.051	247.048	247.058	250.516	250.227	246.635
.28402E+09	246.363	246.360	246.370	249.759	249.475	245.954
.31558E+09	245.914	245.912	245.922	249.251	248.970	245.509
.63115E+09	236.770	236.768	236.776	239.620	239.406	236.503
.94673E+09	228.310	228.308	228.315	230.792	230.632	228.153
.12623E+10	220.285	220.284	220.290	222.489	222.370	220.218
.15779E+10	212.801	212.800	212.805	214.770	214.686	212.805
.18935E+10	206.298	206.297	206.302	208.078	208.018	206.351
.22090E+10	200.716	200.715	200.719	202.335	202.294	200.802
.25246E+10	195.382	195.381	195.385	196.867	196.840	195.493
.28402E+10	191.121	191.120	191.124	192.496	192.479	191.248
.31558E+10	187.310	187.309	187.313	188.584	188.575	187.448
.63115E+10	168.804	168.803	168.805	169.604	169.619	168.953
.94673E+10	160.681	160.681	160.682	161.310	161.330	160.821
.12623E+11	156.052	156.052	156.053	156.579	156.599	156.180
.15779E+11	152.650	152.650	152.651	153.109	153.129	152.768
.18935E+11	149.359	149.359	149.360	149.766	149.785	149.469
.22090E+11	146.580	146.579	146.580	146.945	146.963	146.682
.25246E+11	144.159	144.159	144.160	144.489	144.507	144.254
.28402E+11	142.058	142.057	142.058	142.358	142.375	142.146
.31558E+11	140.261	140.261	140.261	140.538	140.554	140.345

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:39 JUN 17, 1995 CP= 55108.520
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09o000	1192 TEMP t09o000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15o000
.10000E-05	160.099	160.062	160.046	159.959	153.464	141.139
.20000E-05	194.284	194.247	194.228	193.314	186.747	175.028
31.558	194.284	194.247	194.228	193.314	186.746	175.028
.31558E+07	216.569	216.532	216.512	215.234	208.785	197.608
.63116E+07	220.989	220.952	220.932	219.587	213.156	202.078
.94673E+07	223.479	223.442	223.422	222.039	215.633	204.643
.12623E+08	225.280	225.243	225.223	223.811	217.430	206.513
.15779E+08	226.645	226.609	226.589	225.156	218.799	207.949
.18935E+08	227.733	227.697	227.677	226.229	219.896	209.107
.22090E+08	228.641	228.605	228.585	227.125	220.815	210.084

.25246E+08	229.415	229.379	229.359	227.890	221.603	210.926
.28402E+08	230.087	230.051	230.031	228.554	222.289	211.665
.31558E+08	230.680	230.644	230.625	229.141	222.899	212.325
.63115E+08	234.479	234.444	234.425	232.916	226.873	216.712
.94673E+08	236.526	236.492	236.473	234.962	229.092	219.270
.12623E+09	237.711	237.678	237.659	236.159	230.442	220.910
.15779E+09	238.523	238.491	238.473	236.987	231.404	222.118
.18935E+09	238.796	238.765	238.747	237.286	231.841	222.802
.22090E+09	239.021	238.990	238.972	237.532	232.208	223.383
.25246E+09	239.192	239.162	239.144	237.726	232.515	223.889
.28402E+09	238.660	238.630	238.614	237.224	232.118	223.671
.31558E+09	238.342	238.313	238.297	236.929	231.913	223.617
.63115E+09	230.477	230.453	230.440	229.338	225.162	218.241
.94673E+09	222.989	222.969	222.958	222.064	218.526	212.641
.12623E+10	215.713	215.696	215.687	214.955	211.908	206.814
.15779E+10	208.848	208.833	208.825	208.225	205.582	201.139
.18935E+10	202.828	202.815	202.808	202.307	199.979	196.051
.22090E+10	197.639	197.628	197.621	197.196	195.127	191.622
.25246E+10	192.626	192.616	192.611	192.248	190.390	187.229
.28402E+10	188.619	188.609	188.605	188.288	186.596	183.708
.31558E+10	185.035	185.026	185.022	184.745	183.204	180.562
.63115E+10	167.505	167.500	167.498	167.379	166.490	164.937
.94673E+10	159.706	159.702	159.700	159.627	158.956	157.771
.12623E+11	155.256	155.253	155.252	155.200	154.651	153.675
.15779E+11	151.969	151.967	151.966	151.926	151.456	150.615
.18935E+11	148.768	148.765	148.764	148.734	148.324	147.588
.22090E+11	146.055	146.053	146.052	146.028	145.664	145.008
.25246E+11	143.692	143.690	143.689	143.669	143.344	142.757
.28402E+11	141.635	141.634	141.633	141.617	141.323	140.790
.31558E+11	139.876	139.874	139.874	139.860	139.592	139.104

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:39 JUN 17, 1995 CP= 55108.540
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
.10000E-05	121.540	121.480	121.444	118.819	109.671	93.8702
.20000E-05	156.962	156.902	156.865	153.731	144.911	130.181
31.558	156.963	156.902	156.865	153.731	144.911	130.181
.31558E+07	180.712	180.652	180.614	177.262	168.834	154.996
.63116E+07	185.378	185.317	185.279	181.891	173.527	159.850
.94673E+07	188.107	188.047	188.009	184.603	176.294	162.751
.12623E+08	190.110	190.050	190.013	186.599	178.341	164.907
.15779E+08	191.668	191.608	191.571	188.153	179.941	166.605
.18935E+08	192.936	192.876	192.839	189.420	181.252	168.003
.22090E+08	194.015	193.955	193.918	190.501	182.373	169.207
.25246E+08	194.952	194.893	194.855	191.442	183.353	170.263
.28402E+08	195.781	195.722	195.685	192.275	184.225	171.208
.31558E+08	196.528	196.469	196.432	193.027	185.014	172.067
.63115E+08	201.621	201.565	201.528	198.188	190.486	178.111
.94673E+08	204.742	204.687	204.652	201.383	193.941	182.028
.12623E+09	206.851	206.798	206.763	203.566	196.349	184.826
.15779E+09	208.454	208.402	208.368	205.235	198.212	187.017
.18935E+09	209.525	209.474	209.442	206.380	199.552	188.682
.22090E+09	210.440	210.390	210.358	207.360	200.701	190.111
.25246E+09	211.255	211.206	211.175	208.236	201.734	191.404
.28402E+09	211.308	211.261	211.230	208.352	201.991	191.891
.31558E+09	211.483	211.436	211.406	208.578	202.336	192.431
.63115E+09	208.141	208.102	208.078	205.751	200.586	192.409
.94673E+09	204.058	204.026	204.005	202.060	197.700	190.803
.12623E+10	199.379	199.351	199.334	197.683	193.934	187.999

.15779E+10	194.653	194.629	194.614	193.204	189.957	184.807
.18935E+10	190.315	190.295	190.281	189.058	186.203	181.666
.22090E+10	186.499	186.481	186.469	185.396	182.858	178.818
.25246E+10	182.601	182.585	182.575	181.624	179.342	175.703
.28402E+10	179.474	179.459	179.450	178.593	176.514	173.191
.31558E+10	176.685	176.672	176.663	175.890	173.992	170.956
.63115E+10	162.639	162.632	162.627	162.207	161.106	159.327
.94673E+10	156.010	156.004	156.000	155.693	154.858	153.500
.12623E+11	152.221	152.217	152.214	151.967	151.282	150.164
.15779E+11	149.360	149.356	149.354	149.145	148.556	147.593
.18935E+11	146.489	146.486	146.484	146.304	145.789	144.946
.22090E+11	144.027	144.024	144.022	143.864	143.405	142.654
.25246E+11	141.877	141.874	141.872	141.732	141.322	140.648
.28402E+11	139.992	139.989	139.988	139.862	139.490	138.879
.31558E+11	138.372	138.370	138.368	138.254	137.914	137.354

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:39 JUN 17, 1995 CP= 55108.550
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21i000	i21o000	o21o000
.10000E-05	67.4742	67.3671	31.2682	30.3724	26.1377
.20000E-05	105.823	105.710	74.0704	73.0836	68.9917
31.558	105.823	105.710	74.0703	73.0836	68.9917
.31558E+07	132.228	132.114	103.911	102.893	99.0241
.63116E+07	137.381	137.267	109.701	108.679	104.822
.94673E+07	140.529	140.415	113.317	112.296	108.452
.12623E+08	142.880	142.766	116.025	115.006	111.183
.15779E+08	144.759	144.645	118.221	117.204	113.398
.18935E+08	146.320	146.207	120.060	119.046	115.257
.22090E+08	147.674	147.562	121.667	120.656	116.883
.25246E+08	148.871	148.759	123.098	122.090	118.332
.28402E+08	149.950	149.838	124.393	123.388	119.647
.31558E+08	150.936	150.824	125.583	124.582	120.856
.63115E+08	158.004	157.896	134.235	133.266	129.675
.94673E+08	162.734	162.629	140.164	139.223	135.748
.12623E+09	166.207	166.104	144.601	143.686	140.312
.15779E+09	168.964	168.864	148.151	147.258	143.971
.18935E+09	171.184	171.086	151.122	150.252	147.054
.22090E+09	173.088	172.993	153.665	152.816	149.694
.25246E+09	174.820	174.726	155.980	155.150	152.099
.28402E+09	175.691	175.600	157.339	156.526	153.541
.31558E+09	176.556	176.466	158.616	157.819	154.889
.63115E+09	179.375	179.301	164.856	164.200	161.786
.94673E+09	179.848	179.786	167.744	167.194	165.168
.12623E+10	178.595	178.542	168.239	167.770	166.037
.15779E+10	176.660	176.614	167.703	167.300	165.807
.18935E+10	174.495	174.455	166.613	166.261	164.955
.22090E+10	172.437	172.402	165.423	165.111	163.956
.25246E+10	169.958	169.927	163.634	163.355	162.322
.28402E+10	167.948	167.920	162.169	161.917	160.979
.31558E+10	166.167	166.141	160.882	160.653	159.800
.63115E+10	156.521	156.506	153.407	153.277	152.790
.94673E+10	151.359	151.347	148.971	148.874	148.508
.12623E+11	148.400	148.391	146.429	146.350	146.051
.15779E+11	146.074	146.066	144.373	144.304	144.049
.18935E+11	143.617	143.611	142.123	142.064	141.841
.22090E+11	141.469	141.463	140.133	140.081	139.883
.25246E+11	139.586	139.581	138.386	138.339	138.163
.28402E+11	137.916	137.911	136.825	136.783	136.624
.31558E+11	136.472	136.467	135.470	135.432	135.286

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 55108.690 TIME= 20:46:39
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045

VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045

VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045

VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045

VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045

VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045

VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045

VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045

VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045

VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045

VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045

VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045

VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045

VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045

VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045

VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045

VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045

VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045

VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045

VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045

Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045

VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts1i045	139.1	.3156E+11	229.1	.2525E+09
3 NSOL	1017 TEMP	t01i045	139.1	.3156E+11	229.1	.2525E+09
4 NSOL	1025 TEMP	s01i045	139.1	.3156E+11	229.1	.2525E+09
5 NSOL	1124 TEMP	h01i045	139.6	.3156E+11	237.1	.2525E+09
6 NSOL	1136 TEMP	c01i045	140.3	.3156E+11	246.8	.2525E+09
7 NSOL	1148 TEMP	h01o045	140.6	.3156E+11	252.8	.1578E+09
8 NSOL	1051 TEMP	s01o045	140.8	.3156E+11	255.3	.1578E+09
9 NSOL	1043 TEMP	t01o045	140.8	.3156E+11	255.6	.1578E+09

10	NSOL	2040	TEMP	s11i045	140.8	.3156E+11	255.8	.1578E+09
11	NSOL	2139	TEMP	h11i045	141.2	.3156E+11	261.0	.1578E+09
12	NSOL	2151	TEMP	c11i045	141.2	.3156E+11	260.4	.1578E+09
13	NSOL	2163	TEMP	h11o045	140.7	.3156E+11	251.8	.1578E+09
14	NSOL	2066	TEMP	s11o045	139.9	.3156E+11	237.7	.2525E+09
15	NSOL	2058	TEMP	t11o045	139.9	.3156E+11	237.0	.2525E+09
16	NSOL	2910	TEMP	s19i045	139.9	.3156E+11	236.4	.2525E+09
17	NSOL	3009	TEMP	h19i045	139.2	.3156E+11	224.8	.2525E+09
18	NSOL	3021	TEMP	c19i045	124.4	.1000E-05	207.8	.3156E+09
19	NSOL	3033	TEMP	h19o045	83.69	.1000E-05	185.5	.6312E+09
20	NSOL	2936	TEMP	s19o045	35.99	.1000E-05	168.7	.1262E+10
21	NSOL	2928	TEMP	t19o045	34.48	.1000E-05	168.3	.1262E+10
22	NSOL	4182	TEMP	i19o045	29.81	.1000E-05	166.9	.1262E+10
23	NSOL	4411	TEMP	o19o045	26.14	.1000E-05	165.5	.1262E+10
24	NSOL	2876	TEMP	c13i045	139.7	.3156E+11	232.5	.2525E+09
25	NSOL	2296	TEMP	c17i045	139.7	.3156E+11	232.9	.2525E+09
26	NSOL	1490	TEMP	s21o000	67.47	.1000E-05	179.8	.9467E+09
27	NSOL	1482	TEMP	t21o000	67.37	.1000E-05	179.8	.9467E+09
28	NSOL	4217	TEMP	i21i000	31.27	.1000E-05	168.2	.1262E+10
29	NSOL	4207	TEMP	i21o000	30.37	.1000E-05	167.8	.1262E+10
30	NSOL	4437	TEMP	o21o000	26.14	.1000E-05	166.0	.1262E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:42 JUN 17, 1995 CP= 55111.780
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	140.118	140.118	140.125	153.480	169.379	178.567
.20000E-05	177.573	177.573	177.579	189.438	203.735	212.080
31.558	177.573	177.573	177.579	189.438	203.735	212.079
.31558E+07	201.417	201.426	201.435	212.415	225.642	233.401
.63116E+07	206.239	206.248	206.257	217.048	230.071	237.715
.94673E+07	209.028	209.037	209.046	219.696	232.555	240.109
.12623E+08	211.044	211.053	211.062	221.604	234.340	241.819
.15779E+08	212.598	212.607	212.616	223.062	235.687	243.102
.18935E+08	213.848	213.857	213.866	224.228	236.756	244.114
.22090E+08	214.900	214.909	214.918	225.203	237.643	244.950
.25246E+08	215.805	215.814	215.823	226.038	238.395	245.655
.28402E+08	216.596	216.605	216.614	226.763	239.044	246.258
.31558E+08	217.302	217.311	217.320	227.407	239.615	246.786
.63115E+08	221.932	221.941	221.949	231.552	243.190	250.024
.94673E+08	224.591	224.599	224.607	233.835	245.029	251.597
.12623E+09	226.256	226.264	226.272	235.193	246.022	252.371
.15779E+09	227.460	227.468	227.475	236.140	246.664	252.831
.18935E+09	228.090	228.098	228.105	236.524	246.753	252.743
.22090E+09	228.620	228.627	228.635	236.841	246.816	252.654
.25246E+09	229.069	229.076	229.083	237.094	246.834	252.533
.28402E+09	228.762	228.770	228.776	236.619	246.158	251.735
.31558E+09	228.639	228.646	228.653	236.353	245.719	251.194
.63115E+09	222.303	222.309	222.315	228.779	236.651	241.231
.94673E+09	215.934	215.939	215.944	221.484	228.236	232.152
.12623E+10	209.499	209.504	209.508	214.344	220.244	223.656
.15779E+10	203.329	203.333	203.336	207.590	212.782	215.777
.18935E+10	197.866	197.869	197.872	201.665	206.294	208.960
.22090E+10	193.144	193.147	193.150	196.556	200.721	203.117
.25246E+10	188.513	188.516	188.519	191.610	195.392	197.568
.28402E+10	184.815	184.818	184.820	187.660	191.135	193.132
.31558E+10	181.518	181.521	181.523	184.132	187.326	189.161
.63115E+10	165.328	165.329	165.331	166.904	168.830	169.930
.94673E+10	158.004	158.005	158.006	159.221	160.708	161.554
.12623E+11	153.836	153.837	153.838	154.846	156.078	156.777

.15779E+11	150.733	150.734	150.735	151.608	152.674	153.278
.18935E+11	147.678	147.679	147.680	148.446	149.383	149.912
.22090E+11	145.076	145.077	145.077	145.763	146.601	147.075
.25246E+11	142.809	142.809	142.810	143.426	144.179	144.605
.28402E+11	140.830	140.831	140.831	141.392	142.076	142.462
.31558E+11	139.134	139.135	139.135	139.649	140.278	140.633

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:42 JUN 17, 1995 CP= 55111.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.840	183.231	183.598	193.136	194.679	184.695
.20000E-05	215.777	216.110	216.421	224.413	224.993	215.009
31.558	215.777	216.110	216.421	224.412	224.992	215.009
.31558E+07	236.757	237.054	237.331	244.352	244.381	234.571
.63116E+07	241.000	241.292	241.562	248.420	248.355	238.550
.94673E+07	243.333	243.619	243.885	250.619	250.487	240.715
.12623E+08	245.005	245.287	245.549	252.185	252.011	242.270
.15779E+08	246.252	246.531	246.789	253.343	253.132	243.425
.18935E+08	247.231	247.507	247.763	254.246	254.005	244.331
.22090E+08	248.037	248.311	248.564	254.984	254.718	245.077
.25246E+08	248.715	248.986	249.237	255.600	255.312	245.704
.28402E+08	249.294	249.563	249.812	256.121	255.815	246.239
.31558E+08	249.798	250.066	250.313	256.573	256.250	246.706
.63115E+08	252.856	253.107	253.340	259.231	258.803	249.539
.94673E+08	254.293	254.533	254.755	260.375	259.888	250.869
.12623E+09	254.957	255.189	255.402	260.810	260.287	251.486
.15779E+09	255.327	255.550	255.757	260.992	260.445	251.833
.18935E+09	255.155	255.372	255.571	260.648	260.090	251.673
.22090E+09	254.994	255.205	255.399	260.340	259.773	251.527
.25246E+09	254.806	255.012	255.201	260.017	259.445	251.359
.28402E+09	253.954	254.155	254.340	259.060	258.493	250.557
.31558E+09	253.366	253.563	253.744	258.379	257.816	250.005
.63115E+09	243.020	243.186	243.338	247.291	246.843	240.244
.94673E+09	233.665	233.808	233.939	237.377	237.032	231.377
.12623E+10	224.969	225.095	225.210	228.258	227.997	223.077
.15779E+10	216.928	217.039	217.142	219.863	219.672	215.366
.18935E+10	209.983	210.082	210.174	212.633	212.495	208.676
.22090E+10	204.034	204.124	204.207	206.446	206.348	202.930
.25246E+10	198.401	198.483	198.559	200.618	200.553	197.463
.28402E+10	193.898	193.974	194.044	195.951	195.909	193.083
.31558E+10	189.865	189.936	190.001	191.766	191.741	189.155
.63115E+10	170.353	170.396	170.436	171.544	171.575	170.049
.94673E+10	161.878	161.912	161.943	162.814	162.856	161.691
.12623E+11	157.045	157.073	157.099	157.829	157.872	156.913
.15779E+11	153.509	153.534	153.557	154.193	154.236	153.410
.18935E+11	150.115	150.137	150.157	150.720	150.762	150.040
.22090E+11	147.256	147.275	147.293	147.800	147.841	147.198
.25246E+11	144.768	144.785	144.802	145.259	145.298	144.723
.28402E+11	142.611	142.627	142.642	143.059	143.096	142.575
.31558E+11	140.769	140.784	140.798	141.182	141.218	140.741

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:42 JUN 17, 1995 CP= 55111.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	166.036	165.210	164.356	149.512	124.435	83.6929
.20000E-05	197.008	196.196	195.357	180.536	156.742	119.777
31.558	197.008	196.196	195.357	180.535	156.742	119.777
.31558E+07	217.277	216.487	215.671	201.132	178.421	144.111
.63116E+07	221.353	220.566	219.755	205.275	182.765	148.987
.94673E+07	223.628	222.846	222.039	207.637	185.309	151.942
.12623E+08	225.280	224.502	223.699	209.359	187.190	154.152
.15779E+08	226.523	225.748	224.950	210.674	188.646	155.900
.18935E+08	227.512	226.741	225.945	211.731	189.835	157.348
.22090E+08	228.334	227.567	226.775	212.621	190.847	158.598
.25246E+08	229.035	228.271	227.482	213.386	191.728	159.700
.28402E+08	229.641	228.880	228.095	214.054	192.508	160.687
.31558E+08	230.177	229.418	228.637	214.651	193.211	161.588
.63115E+08	233.590	232.858	232.104	218.593	198.044	167.987
.94673E+08	235.405	234.695	233.964	220.860	201.036	172.210
.12623E+09	236.443	235.752	235.040	222.292	203.083	175.278
.15779E+09	237.151	236.477	235.782	223.340	204.654	177.703
.18935E+09	237.357	236.699	236.022	223.895	205.727	179.606
.22090E+09	237.528	236.885	236.223	224.369	206.649	181.242
.25246E+09	237.656	237.027	236.379	224.780	207.475	182.726
.28402E+09	237.124	236.507	235.873	224.510	207.575	183.398
.31558E+09	236.800	236.195	235.572	224.408	207.785	184.093
.63115E+09	229.147	228.641	228.120	218.808	204.990	185.487
.94673E+09	221.884	221.453	221.010	213.104	201.384	184.949
.12623E+10	214.821	214.448	214.065	207.240	197.112	182.967
.15779E+10	208.138	207.813	207.479	201.546	192.732	180.446
.18935E+10	202.262	201.975	201.680	196.448	188.668	177.828
.22090E+10	197.184	196.929	196.666	192.008	185.070	175.403
.25246E+10	192.269	192.039	191.802	187.612	181.357	172.635
.28402E+10	188.330	188.119	187.903	184.083	178.367	170.393
.31558E+10	184.801	184.609	184.411	180.923	175.697	168.401
.63115E+10	167.466	167.354	167.238	165.213	162.145	157.839
.94673E+10	159.715	159.629	159.541	158.008	155.667	152.369
.12623E+11	155.283	155.212	155.140	153.882	151.955	149.233
.15779E+11	152.004	151.943	151.881	150.801	149.140	146.792
.18935E+11	148.808	148.756	148.701	147.759	146.306	144.248
.22090E+11	146.100	146.053	146.004	145.167	143.871	142.033
.25246E+11	143.739	143.696	143.653	142.904	141.743	140.093
.28402E+11	141.682	141.644	141.605	140.927	139.874	138.376
.31558E+11	139.923	139.888	139.853	139.232	138.267	136.894

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:42 JUN 17, 1995 CP= 55111.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
.10000E-05	35.9885	34.4839	29.8071	26.1377	161.002	161.002
.20000E-05	77.9012	76.5858	72.3546	68.9901	191.404	191.405
31.558	77.9012	76.5858	72.3546	68.9901	191.403	191.404
.31558E+07	106.167	104.978	101.079	97.8978	211.267	211.636
.63116E+07	111.823	110.660	106.841	103.686	215.307	215.684
.94673E+07	115.359	114.215	110.454	107.319	217.579	217.956
.12623E+08	118.011	116.882	113.166	110.058	219.233	219.610
.15779E+08	120.156	119.040	115.365	112.277	220.483	220.860
.18935E+08	121.954	120.851	117.211	114.142	221.482	221.859

.22090E+08	123.523	122.431	118.824	115.773	222.317	222.693
.25246E+08	124.920	123.837	120.263	117.227	223.031	223.406
.28402E+08	126.183	125.110	121.565	118.547	223.651	224.026
.31558E+08	127.344	126.280	122.764	119.761	224.201	224.575
.63115E+08	135.776	134.780	131.487	128.616	227.760	228.129
.94673E+08	141.559	140.614	137.490	134.727	229.715	230.076
.12623E+09	145.887	144.983	141.995	139.323	230.883	231.237
.15779E+09	149.351	148.481	145.605	143.010	231.707	232.055
.18935E+09	152.244	151.405	148.635	146.117	232.037	232.378
.22090E+09	154.722	153.910	151.229	148.778	232.316	232.653
.25246E+09	156.976	156.189	153.590	151.200	232.546	232.879
.28402E+09	158.301	157.534	155.004	152.668	232.116	232.441
.31558E+09	159.547	158.798	156.326	154.037	231.878	232.197
.63115E+09	165.555	164.950	162.955	161.080	225.048	225.323
.94673E+09	168.302	167.798	166.139	164.568	218.419	218.660
.12623E+10	168.714	168.283	166.865	165.523	211.850	212.061
.15779E+10	168.110	167.737	166.512	165.355	205.572	205.760
.18935E+10	166.969	166.642	165.564	164.550	200.011	200.181
.22090E+10	165.737	165.445	164.487	163.588	195.189	195.346
.25246E+10	163.921	163.658	162.794	161.988	190.486	190.629
.28402E+10	162.431	162.191	161.402	160.668	186.711	186.844
.31558E+10	161.120	160.900	160.178	159.510	183.329	183.455
.63115E+10	153.548	153.419	152.994	152.608	166.638	166.718
.94673E+10	149.080	148.980	148.654	148.362	159.097	159.162
.12623E+11	146.518	146.436	146.167	145.928	154.781	154.836
.15779E+11	144.449	144.378	144.146	143.940	151.576	151.625
.18935E+11	142.193	142.131	141.927	141.747	148.438	148.481
.22090E+11	140.196	140.140	139.958	139.798	145.773	145.811
.25246E+11	138.443	138.393	138.229	138.086	143.447	143.482
.28402E+11	136.877	136.832	136.682	136.553	141.420	141.451
.31558E+11	135.517	135.475	135.339	135.220	139.684	139.713

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55111.960 TIME= 20:46:43
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3824 TEMP	ts2i180	139.1	.3156E+11	229.0	.2525E+09
3	NSOL	1021 TEMP	t02i180	139.1	.3156E+11	229.0	.2525E+09
4	NSOL	1031 TEMP	s02i180	139.1	.3156E+11	229.0	.2525E+09
5	NSOL	1122 TEMP	h02i180	139.9	.3156E+11	240.7	.2525E+09
6	NSOL	1136 TEMP	c02i180	140.3	.3156E+11	246.8	.2525E+09
7	NSOL	1150 TEMP	h02o180	140.4	.3156E+11	248.9	.2209E+09
8	NSOL	1079 TEMP	s02o180	140.2	.3156E+11	246.9	.2525E+09
9	NSOL	1071 TEMP	t02o180	140.2	.3156E+11	246.9	.2525E+09
10	NSOL	1901 TEMP	s10i180	140.2	.3156E+11	246.9	.2525E+09
11	NSOL	1992 TEMP	h10i180	140.5	.3156E+11	250.4	.1578E+09
12	NSOL	2006 TEMP	c10i180	140.5	.3156E+11	250.1	.1578E+09
13	NSOL	2020 TEMP	h10o180	140.3	.3156E+11	246.3	.2525E+09
14	NSOL	1949 TEMP	s10o180	139.8	.3156E+11	238.7	.2525E+09
15	NSOL	1941 TEMP	t10o180	139.8	.3156E+11	238.7	.2525E+09
16	NSOL	2626 TEMP	s16i180	139.8	.3156E+11	238.7	.2525E+09
17	NSOL	2717 TEMP	h16i180	139.8	.3156E+11	237.2	.2525E+09
18	NSOL	2731 TEMP	c16i180	139.5	.3156E+11	231.9	.2525E+09
19	NSOL	2745 TEMP	h16o180	139.0	.3156E+11	223.2	.2525E+09
20	NSOL	2674 TEMP	s16o180	121.5	.1000E-05	210.7	.3156E+09
21	NSOL	2666 TEMP	t16o180	121.5	.1000E-05	210.6	.3156E+09
22	NSOL	3061 TEMP	s22i180	121.4	.1000E-05	210.6	.3156E+09
23	NSOL	3152 TEMP	h22i180	118.8	.1000E-05	207.7	.3156E+09
24	NSOL	3166 TEMP	c22i180	109.7	.1000E-05	201.4	.3156E+09
25	NSOL	3180 TEMP	h22o180	93.87	.1000E-05	191.5	.6312E+09
26	NSOL	3109 TEMP	s22o180	67.47	.1000E-05	179.0	.9467E+09
27	NSOL	3101 TEMP	t22o180	67.37	.1000E-05	178.9	.9467E+09
28	NSOL	4254 TEMP	i22i180	31.27	.1000E-05	167.3	.1262E+10
29	NSOL	4157 TEMP	i22o180	30.37	.1000E-05	166.8	.1262E+10
30	NSOL	4385 TEMP	o22o180	26.14	.1000E-05	165.0	.1262E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:46 JUN 17, 1995 CP= 55115.690
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.234	177.245	177.347	194.720	203.735	206.780
31.558	177.234	177.245	177.347	194.720	203.735	206.780
.31558E+07	201.260	201.271	201.370	217.353	225.642	228.442
.63116E+07	206.085	206.095	206.193	221.908	230.071	232.828
.94673E+07	208.874	208.885	208.982	224.492	232.555	235.280
.12623E+08	210.892	210.902	210.999	226.354	234.340	237.037
.15779E+08	212.446	212.457	212.553	227.769	235.687	238.361
.18935E+08	213.697	213.708	213.803	228.898	236.756	239.409
.22090E+08	214.750	214.760	214.855	229.840	237.643	240.277
.25246E+08	215.655	215.666	215.760	230.643	238.395	241.012
.28402E+08	216.447	216.457	216.551	231.340	239.044	241.644
.31558E+08	217.153	217.164	217.257	231.956	239.615	242.200
.63115E+08	221.790	221.800	221.890	235.887	243.190	245.652
.94673E+08	224.454	224.464	224.550	238.002	245.029	247.395
.12623E+09	226.123	226.132	226.216	239.223	246.022	248.308
.15779E+09	227.330	227.339	227.421	240.055	246.664	248.884
.18935E+09	227.965	227.974	228.053	240.329	246.753	248.909
.22090E+09	228.498	228.507	228.584	240.551	246.816	248.917
.25246E+09	228.951	228.959	229.035	240.716	246.834	248.884
.28402E+09	228.646	228.655	228.728	240.166	246.158	248.164
.31558E+09	228.525	228.533	228.605	239.835	245.719	247.688
.63115E+09	222.212	222.219	222.278	231.705	236.651	238.295
.94673E+09	215.860	215.865	215.916	223.993	228.236	229.640
.12623E+10	209.437	209.442	209.485	216.536	220.244	221.465
.15779E+10	203.277	203.281	203.319	209.519	212.782	213.852
.18935E+10	197.822	197.826	197.859	203.385	206.294	207.245
.22090E+10	193.107	193.110	193.140	198.103	200.721	201.575
.25246E+10	188.481	188.484	188.511	193.015	195.392	196.167
.28402E+10	184.788	184.790	184.815	188.951	191.135	191.845
.31558E+10	181.495	181.497	181.519	185.319	187.326	187.978
.63115E+10	165.317	165.319	165.332	167.621	168.830	169.219
.94673E+10	157.997	157.999	158.008	159.775	160.708	161.006
.12623E+11	153.832	153.832	153.840	155.304	156.078	156.323
.15779E+11	150.730	150.731	150.738	152.005	152.674	152.886
.18935E+11	147.675	147.676	147.682	148.795	149.383	149.569
.22090E+11	145.074	145.075	145.080	146.075	146.601	146.767
.25246E+11	142.807	142.807	142.812	143.707	144.179	144.328
.28402E+11	140.829	140.829	140.834	141.647	142.076	142.211
.31558E+11	139.133	139.133	139.137	139.884	140.278	140.402

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:46 JUN 17, 1995 CP= 55115.700
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP s02o180	1071 TEMP t02o180	1901 TEMP s10i180	1992 TEMP h10i180	2006 TEMP c10i180	2020 TEMP h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	203.891	203.889	203.904	209.493	209.555	204.790
31.558	203.891	203.889	203.904	209.493	209.554	204.790
.31558E+07	225.804	225.802	225.816	230.691	230.511	225.892
.63116E+07	230.233	230.230	230.243	235.001	234.782	230.189
.94673E+07	232.711	232.708	232.722	237.396	237.152	232.587
.12623E+08	234.494	234.492	234.505	239.114	238.854	234.313
.15779E+08	235.840	235.837	235.850	240.403	240.130	235.611

.18935E+08	236.906	236.904	236.916	241.422	241.138	236.641
.22090E+08	237.791	237.788	237.801	242.265	241.972	237.494
.25246E+08	238.541	238.538	238.551	242.977	242.677	238.218
.28402E+08	239.188	239.185	239.198	243.588	243.282	238.842
.31558E+08	239.757	239.754	239.767	244.125	243.813	239.391
.63115E+08	243.315	243.312	243.324	247.436	247.092	242.823
.94673E+08	245.139	245.136	245.148	249.079	248.719	244.579
.12623E+09	246.120	246.117	246.128	249.916	249.550	245.521
.15779E+09	246.751	246.748	246.759	250.430	250.061	246.128
.18935E+09	246.829	246.827	246.837	250.400	250.032	246.197
.22090E+09	246.883	246.881	246.891	250.361	249.995	246.244
.25246E+09	246.893	246.891	246.900	250.286	249.922	246.250
.28402E+09	246.209	246.207	246.216	249.534	249.177	245.579
.31558E+09	245.764	245.762	245.771	249.031	248.679	245.142
.63115E+09	236.643	236.641	236.649	239.433	239.159	236.191
.94673E+09	228.201	228.199	228.206	230.631	230.417	227.883
.12623E+10	220.191	220.189	220.195	222.349	222.184	219.984
.15779E+10	212.717	212.716	212.721	214.646	214.520	212.597
.18935E+10	206.222	206.221	206.226	207.965	207.868	206.163
.22090E+10	200.646	200.645	200.649	202.232	202.156	200.629
.25246E+10	195.319	195.318	195.321	196.773	196.715	195.335
.28402E+10	191.062	191.061	191.065	192.409	192.362	191.101
.31558E+10	187.255	187.254	187.257	188.501	188.465	187.310
.63115E+10	168.769	168.768	168.770	169.551	169.549	168.865
.94673E+10	160.653	160.653	160.654	161.267	161.273	160.750
.12623E+11	156.028	156.028	156.029	156.543	156.551	156.120
.15779E+11	152.629	152.629	152.630	153.078	153.087	152.715
.18935E+11	149.341	149.341	149.342	149.738	149.748	149.423
.22090E+11	146.563	146.563	146.564	146.920	146.930	146.640
.25246E+11	144.144	144.144	144.145	144.467	144.477	144.217
.28402E+11	142.044	142.044	142.044	142.337	142.347	142.112
.31558E+11	140.248	140.248	140.248	140.519	140.528	140.312

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:46 JUN 17, 1995 CP= 55115.710
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26.VARIABLE LISTING *****

TIME	1949 TEMP s10o180	1941 TEMP t10o180	2626 TEMP s16i180	2717 TEMP h16i180	2731 TEMP c16i180	2745 TEMP h16o180
.10000E-05	160.099	160.063	160.046	159.959	153.464	141.139
.20000E-05	194.282	194.245	194.226	193.312	186.744	175.025
31.558	194.282	194.245	194.226	193.312	186.744	175.025
.31558E+07	216.013	215.976	215.956	214.597	208.054	196.764
.63116E+07	220.425	220.387	220.367	218.940	212.413	201.221
.94673E+07	222.916	222.879	222.858	221.393	214.891	203.788
.12623E+08	224.720	224.682	224.662	223.168	216.691	205.662
.15779E+08	226.086	226.049	226.029	224.514	218.061	207.100
.18935E+08	227.176	227.139	227.119	225.589	219.161	208.261
.22090E+08	228.085	228.049	228.028	226.486	220.082	209.240
.25246E+08	228.861	228.824	228.804	227.253	220.872	210.085
.28402E+08	229.534	229.498	229.478	227.919	221.560	210.826
.31558E+08	230.130	230.094	230.074	228.509	222.173	211.490
.63115E+08	233.941	233.906	233.886	232.296	226.162	215.896
.94673E+08	236.002	235.968	235.949	234.359	228.400	218.476
.12623E+09	237.201	237.167	237.148	235.571	229.768	220.136
.15779E+09	238.025	237.992	237.973	236.412	230.744	221.362
.18935E+09	238.308	238.276	238.258	236.721	231.193	222.060
.22090E+09	238.540	238.509	238.491	236.978	231.571	222.654
.25246E+09	238.718	238.688	238.670	237.179	231.887	223.170
.28402E+09	238.199	238.169	238.152	236.691	231.507	222.971
.31558E+09	237.891	237.861	237.845	236.408	231.314	222.931
.63115E+09	230.095	230.070	230.057	228.895	224.653	217.659

.94673E+09	222.659	222.638	222.627	221.680	218.085	212.138
.12623E+10	215.427	215.409	215.400	214.622	211.525	206.377
.15779E+10	208.594	208.579	208.571	207.929	205.241	200.751
.18935E+10	202.599	202.585	202.578	202.039	199.671	195.700
.22090E+10	197.429	197.417	197.411	196.950	194.845	191.301
.25246E+10	192.435	192.425	192.419	192.024	190.133	186.937
.28402E+10	188.440	188.431	188.426	188.079	186.356	183.436
.31558E+10	184.867	184.859	184.854	184.549	182.978	180.306
.63115E+10	167.398	167.393	167.391	167.254	166.347	164.774
.94673E+10	159.620	159.616	159.614	159.526	158.840	157.640
.12623E+11	155.184	155.181	155.179	155.115	154.553	153.564
.15779E+11	151.905	151.903	151.902	151.851	151.369	150.517
.18935E+11	148.712	148.709	148.708	148.668	148.248	147.503
.22090E+11	146.005	146.003	146.002	145.969	145.596	144.931
.25246E+11	143.646	143.644	143.644	143.616	143.283	142.687
.28402E+11	141.594	141.592	141.591	141.568	141.266	140.726
.31558E+11	139.837	139.835	139.835	139.814	139.539	139.044

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:46 JUN 17, 1995 CP= 55115.730
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	121.540	121.480	121.444	118.819	109.671	93.8701
.20000E-05	156.960	156.899	156.862	153.728	144.908	130.178
31.558	156.960	156.899	156.862	153.728	144.908	130.178
.31558E+07	179.732	179.671	179.632	176.193	167.648	153.651
.63116E+07	184.384	184.323	184.284	180.807	172.324	158.489
.94673E+07	187.115	187.054	187.016	183.520	175.094	161.392
.12623E+08	189.123	189.063	189.024	185.521	177.147	163.555
.15779E+08	190.683	190.622	190.584	187.077	178.749	165.256
.18935E+08	191.954	191.894	191.856	188.348	180.064	166.661
.22090E+08	193.036	192.976	192.938	189.431	181.188	167.868
.25246E+08	193.976	193.917	193.879	190.376	182.173	168.930
.28402E+08	194.809	194.749	194.712	191.213	183.048	169.879
.31558E+08	195.559	195.500	195.462	191.969	183.841	170.743
.63115E+08	200.675	200.618	200.581	197.152	189.339	176.818
.94673E+08	203.823	203.768	203.732	200.377	192.826	180.772
.12623E+09	205.957	205.903	205.868	202.587	195.263	183.603
.15779E+09	207.581	207.528	207.494	204.279	197.151	185.822
.18935E+09	208.670	208.619	208.586	205.443	198.512	187.512
.22090E+09	209.601	209.551	209.518	206.440	199.680	188.963
.25246E+09	210.428	210.379	210.347	207.330	200.728	190.273
.28402E+09	210.503	210.455	210.424	207.469	201.011	190.789
.31558E+09	210.695	210.649	210.618	207.714	201.378	191.353
.63115E+09	207.475	207.436	207.411	205.020	199.776	191.500
.94673E+09	203.484	203.452	203.431	201.429	197.002	190.021
.12623E+10	198.882	198.854	198.837	197.136	193.330	187.323
.15779E+10	194.213	194.189	194.174	192.720	189.422	184.209
.18935E+10	189.919	189.898	189.885	188.622	185.720	181.127
.22090E+10	186.137	186.118	186.106	184.997	182.417	178.325
.25246E+10	182.272	182.255	182.245	181.260	178.940	175.255
.28402E+10	179.167	179.152	179.142	178.254	176.139	172.774
.31558E+10	176.397	176.383	176.375	175.572	173.641	170.565
.63115E+10	162.456	162.449	162.444	162.005	160.883	159.079
.94673E+10	155.863	155.857	155.854	155.531	154.679	153.301
.12623E+11	152.097	152.092	152.089	151.830	151.130	149.995
.15779E+11	149.251	149.247	149.244	149.024	148.422	147.444
.18935E+11	146.394	146.390	146.388	146.198	145.672	144.817
.22090E+11	143.941	143.938	143.936	143.769	143.300	142.537
.25246E+11	141.799	141.796	141.795	141.646	141.227	140.543

.28402E+11	139.920	139.918	139.916	139.783	139.403	138.782
.31558E+11	138.305	138.303	138.301	138.180	137.832	137.264

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:46 JUN 17, 1995 CP= 55115.740
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4742	67.3670	31.2682	30.3723	26.1377
.20000E-05	105.820	105.707	74.0668	73.0801	68.9884
31.558	105.820	105.707	74.0667	73.0801	68.9884
.31558E+07	130.657	130.542	101.863	100.833	96.7715
.63116E+07	135.791	135.675	107.634	106.600	102.549
.94673E+07	138.942	138.827	111.258	110.224	106.187
.12623E+08	141.301	141.186	113.979	112.947	108.932
.15779E+08	143.182	143.068	116.182	115.152	111.155
.18935E+08	144.750	144.637	118.033	117.006	113.027
.22090E+08	146.109	145.996	119.649	118.624	114.662
.25246E+08	147.313	147.200	121.090	120.069	116.122
.28402E+08	148.397	148.284	122.394	121.376	117.446
.31558E+08	149.389	149.277	123.595	122.580	118.667
.63115E+08	156.496	156.387	132.311	131.329	127.556
.94673E+08	161.273	161.166	138.310	137.357	133.706
.12623E+09	164.786	164.683	142.808	141.880	138.335
.15779E+09	167.578	167.477	146.408	145.503	142.050
.18935E+09	169.828	169.729	149.423	148.541	145.181
.22090E+09	171.759	171.662	152.004	151.142	147.862
.25246E+09	173.511	173.416	154.349	153.506	150.300
.28402E+09	174.418	174.325	155.756	154.931	151.795
.31558E+09	175.311	175.220	157.071	156.262	153.185
.63115E+09	178.330	178.255	163.576	162.910	160.374
.94673E+09	178.954	178.890	166.658	166.099	163.968
.12623E+10	177.823	177.769	167.308	166.831	165.009
.15779E+10	175.979	175.932	166.885	166.474	164.903
.18935E+10	173.883	173.842	165.880	165.522	164.145
.22090E+10	171.879	171.843	164.755	164.439	163.219
.25246E+10	169.451	169.419	163.029	162.745	161.654
.28402E+10	167.476	167.447	161.607	161.350	160.357
.31558E+10	165.725	165.699	160.357	160.123	159.220
.63115E+10	156.242	156.227	153.077	152.944	152.426
.94673E+10	151.135	151.124	148.708	148.608	148.217
.12623E+11	148.211	148.202	146.206	146.125	145.804
.15779E+11	145.908	145.900	144.176	144.107	143.832
.18935E+11	143.472	143.466	141.952	141.892	141.653
.22090E+11	141.339	141.332	139.979	139.926	139.713
.25246E+11	139.468	139.463	138.247	138.199	138.009
.28402E+11	137.808	137.803	136.697	136.654	136.483
.31558E+11	136.370	136.366	135.350	135.311	135.154

 Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55115.890 TIME= 20:46:47
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180
 VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180
 VARIABLE 7 IS AT NODE 71 ITEM= TEMP COMP= NAME= h02o180
 VARIABLE 8 IS AT NODE 22 ITEM= TEMP COMP= NAME= s02o180
 VARIABLE 9 IS AT NODE 120 ITEM= TEMP COMP= NAME= t02o180
 VARIABLE 10 IS AT NODE 161 ITEM= TEMP COMP= NAME= s10i180
 VARIABLE 11 IS AT NODE 252 ITEM= TEMP COMP= NAME= h10i180
 VARIABLE 12 IS AT NODE 266 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 280 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 209 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 201 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 306 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 397 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 411 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 425 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 354 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 346 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 451 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 542 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 556 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 570 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 499 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 491 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 3991 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3981 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4617 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3802 TEMP	ts2i180	139.1	.3156E+11	228.7	.2525E+09
3	NSOL	87 TEMP	t02i180	139.1	.3156E+11	228.7	.2525E+09
4	NSOL	6 TEMP	s02i180	139.1	.3156E+11	228.8	.2525E+09
5	NSOL	43 TEMP	h02i180	139.9	.3156E+11	240.5	.2525E+09
6	NSOL	57 TEMP	c02i180	140.3	.3156E+11	246.6	.2525E+09
7	NSOL	71 TEMP	h02o180	140.4	.3156E+11	248.7	.2209E+09
8	NSOL	22 TEMP	s02o180	140.2	.3156E+11	246.7	.2525E+09
9	NSOL	120 TEMP	t02o180	140.2	.3156E+11	246.7	.2525E+09
10	NSOL	161 TEMP	s10i180	140.2	.3156E+11	246.7	.2525E+09
11	NSOL	252 TEMP	h10i180	140.5	.3156E+11	250.2	.1578E+09
12	NSOL	266 TEMP	c10i180	140.5	.3156E+11	249.8	.1578E+09
13	NSOL	280 TEMP	h10o180	140.3	.3156E+11	246.0	.2525E+09
14	NSOL	209 TEMP	s10o180	139.8	.3156E+11	238.5	.2525E+09

15	NSOL	201	TEMP	t10o180	139.8	.3156E+11	238.5	.2525E+09
16	NSOL	306	TEMP	s16i180	139.8	.3156E+11	238.4	.2525E+09
17	NSOL	397	TEMP	h16i180	139.8	.3156E+11	237.0	.2525E+09
18	NSOL	411	TEMP	c16i180	139.5	.3156E+11	231.7	.2525E+09
19	NSOL	425	TEMP	h16o180	139.0	.3156E+11	222.9	.2525E+09
20	NSOL	354	TEMP	s16o180	121.5	.1000E-05	210.5	.3156E+09
21	NSOL	346	TEMP	t16o180	121.5	.1000E-05	210.4	.3156E+09
22	NSOL	451	TEMP	s22i180	121.4	.1000E-05	210.4	.3156E+09
23	NSOL	542	TEMP	h22i180	118.8	.1000E-05	207.5	.3156E+09
24	NSOL	556	TEMP	c22i180	109.7	.1000E-05	201.1	.3156E+09
25	NSOL	570	TEMP	h22o180	93.87	.1000E-05	191.3	.6312E+09
26	NSOL	499	TEMP	s22o180	67.47	.1000E-05	178.8	.9467E+09
27	NSOL	491	TEMP	t22o180	67.37	.1000E-05	178.7	.9467E+09
28	NSOL	3991	TEMP	i22i180	31.27	.1000E-05	167.2	.1262E+10
29	NSOL	3981	TEMP	i22o180	30.37	.1000E-05	166.7	.1262E+10
30	NSOL	4617	TEMP	o22o180	26.14	.1000E-05	164.9	.1262E+10

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:46:50 JUN 17, 1995 CP= 55119.620
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.229	177.240	177.342	194.715	203.731	206.776
31.558	177.229	177.240	177.342	194.715	203.730	206.775
.31558E+07	200.945	200.956	201.054	217.064	225.368	228.177
.63116E+07	205.765	205.776	205.874	221.613	229.792	232.558
.94673E+07	208.556	208.567	208.664	224.199	232.277	235.010
.12623E+08	210.575	210.586	210.682	226.061	234.063	236.769
.15779E+08	212.131	212.141	212.237	227.478	235.410	238.093
.18935E+08	213.383	213.394	213.489	228.608	236.480	239.012
.22090E+08	214.437	214.447	214.542	229.551	237.368	240.141
.25246E+08	215.344	215.354	215.448	230.355	238.121	240.747
.28402E+08	216.136	216.147	216.241	231.052	238.770	241.380
.31558E+08	216.844	216.854	216.948	231.669	239.342	241.936
.63115E+08	221.489	221.499	221.588	235.606	242.923	245.393
.94673E+08	224.161	224.171	224.257	237.729	244.768	247.142
.12623E+09	225.838	225.848	225.931	238.957	245.767	248.061
.15779E+09	227.052	227.062	227.143	239.795	246.414	248.642
.18935E+09	227.693	227.702	227.782	240.074	246.508	248.671
.22090E+09	228.232	228.241	228.318	240.301	246.576	248.683
.25246E+09	228.689	228.698	228.773	240.470	246.598	248.653
.28402E+09	228.391	228.400	228.475	239.926	245.927	247.939
.31558E+09	228.276	228.284	228.356	239.601	245.494	247.468
.63115E+09	222.003	222.009	222.069	231.507	236.460	238.107
.94673E+09	215.679	215.685	215.735	223.821	228.070	229.476
.12623E+10	209.281	209.286	209.329	216.386	220.098	221.322
.15779E+10	203.139	203.143	203.181	209.387	212.653	213.725
.18935E+10	197.698	197.702	197.735	203.265	206.177	207.130
.22090E+10	192.994	192.997	193.027	197.993	200.614	201.469
.25246E+10	188.378	188.381	188.408	192.915	195.294	196.070
.28402E+10	184.691	184.694	184.718	188.858	191.043	191.754
.31558E+10	181.404	181.407	181.429	185.232	187.240	187.893
.63115E+10	165.260	165.261	165.274	167.565	168.775	169.164
.94673E+10	157.952	157.953	157.962	159.730	160.664	160.962
.12623E+11	153.793	153.793	153.801	155.266	156.040	156.286
.15779E+11	150.696	150.697	150.704	151.971	152.641	152.853
.18935E+11	147.645	147.646	147.652	148.766	149.354	149.540
.22090E+11	145.047	145.048	145.053	146.049	146.575	146.741
.25246E+11	142.782	142.783	142.788	143.683	144.155	144.305
.28402E+11	140.806	140.807	140.811	141.624	142.054	142.189

1 .31558E+11 139.112 139.112 139.116 139.863 140.257 140.382

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:50 JUN 17, 1995 CP= 55119.630
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP s02o180	120 TEMP t02o180	161 TEMP s10i180	252 TEMP h10i180	266 TEMP c10i180	280 TEMP h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	203.887	203.885	203.900	209.489	209.551	204.786
31.558	203.887	203.885	203.900	209.489	209.550	204.786
.31558E+07	225.546	225.543	225.557	230.440	230.264	225.647
.63116E+07	229.968	229.965	229.979	234.743	234.529	229.938
.94673E+07	232.447	232.444	232.457	237.139	236.899	232.335
.12623E+08	234.231	234.229	234.242	238.857	238.602	234.062
.15779E+08	235.577	235.574	235.587	240.147	239.878	235.361
.18935E+08	236.644	236.642	236.654	241.167	240.887	236.391
.22090E+08	237.530	237.527	237.540	242.010	241.721	237.245
.25246E+08	238.280	238.277	238.290	242.723	242.427	237.970
.28402E+08	238.928	238.925	238.938	243.335	243.033	238.594
.31558E+08	239.498	239.495	239.507	243.872	243.564	239.144
.63115E+08	243.060	243.057	243.069	247.187	246.847	242.579
.94673E+08	244.890	244.888	244.899	248.835	248.479	244.340
.12623E+09	245.876	245.873	245.884	249.678	249.315	245.287
.15779E+09	246.513	246.510	246.520	250.196	249.830	245.898
.18935E+09	246.595	246.592	246.603	250.170	249.805	245.971
.22090E+09	246.653	246.650	246.660	250.135	249.771	246.022
.25246E+09	246.666	246.664	246.673	250.063	249.701	246.031
.28402E+09	245.988	245.985	245.995	249.317	248.962	245.365
.31558E+09	245.547	245.545	245.554	248.818	248.468	244.932
.63115E+09	236.458	236.455	236.463	239.251	238.977	236.011
.94673E+09	228.039	228.037	228.043	230.471	230.258	227.725
.12623E+10	220.049	220.047	220.053	222.208	222.044	219.844
.15779E+10	212.591	212.590	212.595	214.521	214.395	212.472
.18935E+10	206.107	206.106	206.111	207.852	207.755	206.050
.22090E+10	200.541	200.540	200.544	202.127	202.052	200.525
.25246E+10	195.222	195.221	195.225	196.677	196.619	195.240
.28402E+10	190.972	190.971	190.974	192.319	192.273	191.011
.31558E+10	187.170	187.169	187.172	188.417	188.380	187.225
.63115E+10	168.714	168.714	168.715	169.496	169.494	168.810
.94673E+10	160.609	160.608	160.610	161.223	161.229	160.706
.12623E+11	155.990	155.990	155.991	156.505	156.514	156.082
.15779E+11	152.596	152.595	152.596	153.045	153.054	152.682
.18935E+11	149.312	149.312	149.313	149.709	149.719	149.394
.22090E+11	146.537	146.537	146.538	146.894	146.904	146.614
.25246E+11	144.120	144.120	144.121	144.443	144.453	144.193
.28402E+11	142.022	142.022	142.023	142.316	142.325	142.090
.31558E+11	140.227	140.227	140.228	140.498	140.508	140.292

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:50 JUN 17, 1995 CP= 55119.640
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
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.10000E-05	160.099	160.062	160.046	159.959	153.464	141.139
.20000E-05	194.278	194.241	194.222	193.308	186.740	175.021
31.558	194.278	194.241	194.222	193.308	186.740	175.021
.31558E+07	215.766	215.729	215.709	214.351	207.804	196.506
.63116E+07	220.172	220.135	220.114	218.687	212.157	200.956
.94673E+07	222.663	222.626	222.606	221.141	214.634	203.523
.12623E+08	224.468	224.431	224.410	222.916	216.436	205.399
.15779E+08	225.834	225.797	225.777	224.262	217.806	206.836
.18935E+08	226.925	226.889	226.868	225.338	218.906	207.998
.22090E+08	227.835	227.798	227.778	226.236	219.828	208.978
.25246E+08	228.611	228.575	228.554	227.004	220.618	209.823
.28402E+08	229.285	229.249	229.229	227.670	221.307	210.565
.31558E+08	229.882	229.846	229.825	228.260	221.921	211.229
.63115E+08	233.696	233.661	233.641	232.051	225.913	215.639
.94673E+08	235.763	235.728	235.709	234.119	228.156	218.224
.12623E+09	236.966	236.932	236.913	235.336	229.528	219.890
.15779E+09	237.794	237.762	237.743	236.181	230.509	221.119
.18935E+09	238.081	238.049	238.031	236.494	230.962	221.821
.22090E+09	238.317	238.286	238.268	236.754	231.344	222.419
.25246E+09	238.498	238.467	238.450	236.958	231.662	222.938
.28402E+09	237.983	237.953	237.936	236.474	231.286	222.744
.31558E+09	237.680	237.650	237.634	236.196	231.098	222.709
.63115E+09	229.913	229.889	229.875	228.712	224.467	217.468
.94673E+09	222.499	222.479	222.467	221.519	217.921	211.970
.12623E+10	215.286	215.269	215.259	214.481	211.381	206.230
.15779E+10	208.468	208.453	208.445	207.802	205.112	200.618
.18935E+10	202.484	202.471	202.464	201.924	199.554	195.580
.22090E+10	197.324	197.312	197.306	196.844	194.737	191.191
.25246E+10	192.339	192.328	192.323	191.927	190.034	186.836
.28402E+10	188.350	188.341	188.336	187.988	186.264	183.341
.31558E+10	184.783	184.774	184.770	184.464	182.891	180.217
.63115E+10	167.343	167.338	167.336	167.199	166.290	164.717
.94673E+10	159.576	159.572	159.570	159.482	158.795	157.593
.12623E+11	155.146	155.143	155.141	155.076	154.514	153.525
.15779E+11	151.872	151.870	151.868	151.817	151.335	150.482
.18935E+11	148.683	148.680	148.679	148.639	148.219	147.473
.22090E+11	145.978	145.977	145.976	145.942	145.569	144.904
.25246E+11	143.622	143.621	143.620	143.592	143.258	142.662
.28402E+11	141.572	141.570	141.569	141.545	141.244	140.703
.31558E+11	139.816	139.815	139.814	139.794	139.518	139.023

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:50 JUN 17, 1995 CP= 55119.650
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	121.540	121.480	121.444	118.819	109.671	93.8702
.20000E-05	156.955	156.895	156.858	153.724	144.903	130.174
31.558	156.955	156.895	156.858	153.724	144.903	130.174
.31558E+07	179.459	179.398	179.360	175.923	167.377	153.377
.63116E+07	184.105	184.044	184.006	180.531	172.048	158.211
.94673E+07	186.836	186.776	186.737	183.244	174.817	161.114
.12623E+08	188.845	188.785	188.746	185.246	176.871	163.278
.15779E+08	190.405	190.345	190.307	186.801	178.473	164.980
.18935E+08	191.677	191.617	191.579	188.074	179.790	166.386
.22090E+08	192.759	192.699	192.661	189.157	180.914	167.593
.25246E+08	193.701	193.641	193.603	190.103	181.900	168.657
.28402E+08	194.534	194.474	194.436	190.940	182.775	169.606
.31558E+08	195.285	195.226	195.188	191.696	183.569	170.471
.63115E+08	200.403	200.346	200.310	196.883	189.071	176.550

.94673E+08	203.558	203.502	203.467	200.113	192.564	180.511
.12623E+09	205.697	205.643	205.608	202.329	195.006	183.347
.15779E+09	207.326	207.273	207.239	204.025	196.898	185.572
.18935E+09	208.419	208.368	208.335	205.194	198.264	187.267
.22090E+09	209.354	209.304	209.272	206.195	199.436	188.721
.25246E+09	210.184	210.135	210.104	207.087	200.487	190.034
.28402E+09	210.265	210.217	210.186	207.232	200.776	190.557
.31558E+09	210.462	210.415	210.385	207.483	201.147	191.126
.63115E+09	207.275	207.236	207.211	204.821	199.578	191.307
.94673E+09	203.309	203.276	203.255	201.255	196.829	189.853
.12623E+10	198.729	198.701	198.683	196.983	193.179	187.177
.15779E+10	194.076	194.053	194.037	192.584	189.288	184.079
.18935E+10	189.795	189.774	189.761	188.499	185.599	181.009
.22090E+10	186.023	186.004	185.992	184.884	182.305	178.218
.25246E+10	182.168	182.151	182.140	181.157	178.839	175.157
.28402E+10	179.070	179.055	179.045	178.157	176.044	172.682
.31558E+10	176.306	176.292	176.283	175.481	173.552	170.479
.63115E+10	162.398	162.390	162.385	161.947	160.826	159.024
.94673E+10	155.816	155.810	155.806	155.484	154.633	153.257
.12623E+11	152.057	152.052	152.049	151.790	151.091	149.957
.15779E+11	149.215	149.211	149.209	148.989	148.388	147.411
.18935E+11	146.363	146.359	146.357	146.167	145.642	144.788
.22090E+11	143.913	143.910	143.908	143.741	143.273	142.511
.25246E+11	141.774	141.771	141.769	141.621	141.202	140.520
.28402E+11	139.897	139.895	139.893	139.759	139.380	138.761
.31558E+11	138.283	138.281	138.280	138.158	137.811	137.243

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:50 JUN 17, 1995 CP= 55119.670
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP	491 TEMP	3991 TEMP	3981 TEMP	4617 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4742	67.3671	31.2682	30.3724	26.1377
.20000E-05	105.815	105.702	74.0615	73.0748	68.9842
31.558	105.815	105.702	74.0615	73.0748	68.9842
.31558E+07	130.377	130.262	101.551	100.520	96.5210
.63116E+07	135.506	135.391	107.319	106.285	102.297
.94673E+07	138.659	138.544	110.944	109.910	105.936
.12623E+08	141.019	140.904	113.667	112.635	108.683
.15779E+08	142.901	142.787	115.871	114.842	110.907
.18935E+08	144.471	144.357	117.725	116.698	112.780
.22090E+08	145.830	145.717	119.342	118.317	114.416
.25246E+08	147.035	146.922	120.785	119.764	115.878
.28402E+08	148.120	148.007	122.090	121.072	117.203
.31558E+08	149.113	149.001	123.292	122.277	118.424
.63115E+08	156.226	156.117	132.019	131.036	127.322
.94673E+08	161.010	160.904	138.028	137.074	133.479
.12623E+09	164.531	164.427	142.534	141.606	138.116
.15779E+09	167.329	167.228	146.142	145.237	141.837
.18935E+09	169.583	169.485	149.163	148.281	144.973
.22090E+09	171.519	171.422	151.750	150.889	147.660
.25246E+09	173.275	173.181	154.100	153.258	150.101
.28402E+09	174.188	174.096	155.514	154.689	151.602
.31558E+09	175.086	174.996	156.836	156.027	152.996
.63115E+09	178.142	178.067	163.381	162.715	160.218
.94673E+09	178.790	178.727	166.491	165.933	163.835
.12623E+10	177.682	177.628	167.165	166.688	164.894
.15779E+10	175.854	175.807	166.759	166.349	164.802
.18935E+10	173.770	173.729	165.767	165.409	164.055
.22090E+10	171.776	171.740	164.653	164.336	163.137
.25246E+10	169.357	169.325	162.935	162.652	161.579
.28402E+10	167.388	167.359	161.520	161.263	160.288

.31558E+10	165.643	165.617	160.276	160.042	159.155
.63115E+10	156.190	156.175	153.026	152.893	152.385
.94673E+10	151.093	151.082	148.667	148.567	148.184
.12623E+11	148.175	148.166	146.171	146.090	145.777
.15779E+11	145.877	145.869	144.146	144.076	143.808
.18935E+11	143.445	143.438	141.926	141.865	141.631
.22090E+11	141.314	141.308	139.955	139.901	139.694
.25246E+11	139.446	139.441	138.225	138.177	137.992
.28402E+11	137.787	137.782	136.677	136.634	136.467
.31558E+11	136.351	136.347	135.332	135.292	135.139

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 55119.810 TIME= 20:46:50.
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135

VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135

VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135

VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135

VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135

VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135

VARIABLE 10 IS AT NODE 1607 ITEM= TEMP COMP= NAME= s12i135

VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135

VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135

VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135

VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135

VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135

VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135

VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135

VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135

VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135

VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135

VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135

VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= i20o135

VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
 Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135

VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts2i135	139.1	.3156E+11	229.1	.2525E+09
3 NSOL	82 TEMP	t02i135	139.1	.3156E+11	229.1	.2525E+09
4 NSOL	1 TEMP	s02i135	139.1	.3156E+11	229.1	.2525E+09
5 NSOL	41 TEMP	h02i135	139.6	.3156E+11	237.0	.2525E+09
6 NSOL	57 TEMP	c02i135	140.3	.3156E+11	246.6	.2525E+09
7 NSOL	73 TEMP	h02o135	140.6	.3156E+11	252.5	.1578E+09
8 NSOL	10 TEMP	s02o135	140.7	.3156E+11	254.9	.1578E+09
9 NSOL	116 TEMP	t02o135	140.7	.3156E+11	255.1	.1578E+09
10 NSOL	1607 TEMP	s12i135	140.8	.3156E+11	255.3	.1578E+09
11 NSOL	1700 TEMP	h12i135	141.1	.3156E+11	260.4	.1578E+09
12 NSOL	1716 TEMP	c12i135	141.2	.3156E+11	259.8	.1578E+09
13 NSOL	1732 TEMP	h12o135	140.7	.3156E+11	251.1	.1578E+09
14 NSOL	1655 TEMP	s12o135	139.8	.3156E+11	236.8	.2525E+09
15 NSOL	1647 TEMP	t12o135	139.8	.3156E+11	236.2	.2525E+09
16 NSOL	2477 TEMP	s20i135	139.8	.3156E+11	235.5	.2525E+09
17 NSOL	2570 TEMP	h20i135	139.1	.3156E+11	223.8	.2525E+09
18 NSOL	2586 TEMP	c20i135	124.4	.1000E-05	206.7	.3156E+09
19 NSOL	2602 TEMP	h20o135	83.69	.1000E-05	184.5	.6312E+09
20 NSOL	2525 TEMP	s20o135	35.99	.1000E-05	167.9	.1262E+10
21 NSOL	2517 TEMP	t20o135	34.48	.1000E-05	167.4	.1262E+10
22 NSOL	3956 TEMP	i20o135	29.81	.1000E-05	166.0	.1262E+10
23 NSOL	4591 TEMP	o20o135	26.14	.1000E-05	164.7	.1262E+10
24 NSOL	2441 TEMP	c14i135	139.6	.3156E+11	231.9	.2525E+09
25 NSOL	1861 TEMP	c18i135	139.6	.3156E+11	231.8	.2525E+09
26 NSOL	499 TEMP	s22o180	67.47	.1000E-05	178.8	.9467E+09
27 NSOL	491 TEMP	t22o180	67.37	.1000E-05	178.7	.9467E+09
28 NSOL	3991 TEMP	i22i180	31.27	.1000E-05	167.2	.1262E+10
29 NSOL	3981 TEMP	i22o180	30.37	.1000E-05	166.7	.1262E+10
30 NSOL	4617 TEMP	o22o180	26.14	.1000E-05	164.9	.1262E+10

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:54 JUN 17, 1995 CP= 55122.890
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts2i135	82 TEMP t02i135	1 TEMP s02i135	41 TEMP h02i135	57 TEMP c02i135	73 TEMP h02o135
.10000E-05	140.118	140.118	140.125	153.480	169.379	178.567
.20000E-05	177.573	177.573	177.579	189.435	203.731	212.073
31.558	177.573	177.573	177.579	189.435	203.730	212.073
.31558E+07	201.417	201.408	201.411	212.263	225.368	233.010
.63116E+07	206.239	206.229	206.232	216.894	229.792	237.316
.94673E+07	209.028	209.019	209.021	219.542	232.277	239.710
.12623E+08	211.044	211.035	211.038	221.451	234.063	241.422
.15779E+08	212.598	212.589	212.592	222.909	235.410	242.706
.18935E+08	213.848	213.839	213.842	224.075	236.480	243.719
.22090E+08	214.900	214.891	214.894	225.052	237.368	244.555
.25246E+08	215.805	215.796	215.799	225.887	238.121	245.262
.28402E+08	216.596	216.587	216.590	226.612	238.770	245.866
.31558E+08	217.302	217.293	217.296	227.257	239.342	246.395
.63115E+08	221.932	221.924	221.926	231.405	242.923	249.639
.94673E+08	224.591	224.583	224.585	233.692	244.768	251.222
.12623E+09	226.256	226.248	226.250	235.053	245.767	252.005
.15779E+09	227.460	227.452	227.454	236.004	246.414	252.472
.18935E+09	228.090	228.083	228.085	236.390	246.508	252.391
.22090E+09	228.620	228.612	228.614	236.710	246.576	252.308
.25246E+09	229.069	229.061	229.063	236.965	246.598	252.191
.28402E+09	228.762	228.755	228.757	236.494	245.927	251.402
.31558E+09	228.639	228.632	228.634	236.230	245.494	250.867
.63115E+09	222.303	222.297	222.299	228.676	236.460	240.952

.94673E+09	215.934	215.929	215.930	221.394	228.070	231.908
.12623E+10	209.499	209.495	209.496	214.266	220.098	223.443
.15779E+10	203.329	203.325	203.326	207.521	212.653	215.588
.18935E+10	197.866	197.862	197.863	201.602	206.177	208.788
.22090E+10	193.144	193.140	193.141	196.499	200.614	202.959
.25246E+10	188.513	188.510	188.511	191.558	195.294	197.423
.28402E+10	184.815	184.812	184.813	187.611	191.043	192.997
.31558E+10	181.518	181.516	181.516	184.087	187.240	189.034
.63115E+10	165.328	165.326	165.326	166.875	168.775	169.848
.94673E+10	158.004	158.002	158.002	159.198	160.664	161.488
.12623E+11	153.836	153.835	153.835	154.826	156.040	156.721
.15779E+11	150.733	150.732	150.732	151.590	152.641	153.229
.18935E+11	147.678	147.677	147.677	148.431	149.354	149.869
.22090E+11	145.076	145.075	145.075	145.749	146.575	147.036
.25246E+11	142.809	142.808	142.808	143.414	144.155	144.569
.28402E+11	140.830	140.830	140.830	141.380	142.054	142.430
.31558E+11	139.134	139.133	139.133	139.639	140.257	140.602

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:54 JUN 17, 1995 CP= 55122.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.840	183.231	183.598	193.136	194.679	184.695
.20000E-05	215.769	216.102	216.412	224.403	224.982	214.996
31.558	215.769	216.102	216.412	224.402	224.981	214.995
.31558E+07	236.256	236.548	236.820	243.748	243.679	233.751
.63116E+07	240.488	240.774	241.039	247.801	247.634	237.708
.94673E+07	242.821	243.102	243.362	250.000	249.765	239.873
.12623E+08	244.494	244.772	245.028	251.569	251.291	241.430
.15779E+08	245.742	246.016	246.269	252.727	252.413	242.586
.18935E+08	246.723	246.994	247.245	253.632	253.289	243.494
.22090E+08	247.530	247.799	248.047	254.371	254.003	244.241
.25246E+08	248.209	248.475	248.721	254.989	254.598	244.871
.28402E+08	248.789	249.053	249.297	255.511	255.103	245.407
.31558E+08	249.295	249.558	249.800	255.965	255.540	245.876
.63115E+08	252.361	252.607	252.835	258.631	258.101	248.719
.94673E+08	253.809	254.045	254.261	259.788	259.200	250.065
.12623E+09	254.484	254.711	254.919	260.235	259.613	250.698
.15779E+09	254.863	255.082	255.283	260.427	259.783	251.058
.18935E+09	254.699	254.911	255.106	260.093	259.438	250.911
.22090E+09	254.546	254.752	254.941	259.793	259.131	250.776
.25246E+09	254.364	254.565	254.749	259.477	258.810	250.617
.28402E+09	253.522	253.719	253.899	258.531	257.872	249.831
.31558E+09	252.943	253.135	253.312	257.861	257.207	249.294
.63115E+09	242.658	242.820	242.968	246.845	246.317	239.630
.94673E+09	233.348	233.487	233.615	236.985	236.568	230.836
.12623E+10	224.692	224.814	224.926	227.914	227.589	222.602
.15779E+10	216.680	216.788	216.888	219.555	219.306	214.940
.18935E+10	209.757	209.854	209.944	212.353	212.162	208.288
.22090E+10	203.827	203.915	203.996	206.187	206.041	202.572
.25246E+10	198.211	198.292	198.366	200.381	200.272	197.134
.28402E+10	193.721	193.795	193.863	195.729	195.645	192.775
.31558E+10	189.699	189.767	189.830	191.557	191.493	188.866
.63115E+10	170.245	170.287	170.326	171.408	171.413	169.861
.94673E+10	161.791	161.824	161.854	162.704	162.725	161.539
.12623E+11	156.971	156.998	157.023	157.735	157.760	156.783
.15779E+11	153.444	153.468	153.490	154.110	154.137	153.295
.18935E+11	150.058	150.079	150.098	150.648	150.676	149.939
.22090E+11	147.205	147.223	147.241	147.735	147.763	147.107
.25246E+11	144.721	144.738	144.754	145.200	145.228	144.641

.28402E+11	142.568	142.583	142.597	143.004	143.031	142.499
.31558E+11	140.729	140.743	140.756	141.131	141.157	140.670

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:54 JUN 17, 1995 CP= 55122.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	166.036	165.210	164.356	149.512	124.435	83.6929
.20000E-05	196.992	196.180	195.341	180.518	156.721	119.752
31.558	196.992	196.180	195.341	180.517	156.721	119.752
.31558E+07	216.321	215.524	214.703	200.044	177.176	142.614
.63116E+07	220.374	219.582	218.764	204.162	181.495	147.467
.94673E+07	222.650	221.862	221.049	206.526	184.040	150.427
.12623E+08	224.305	223.521	222.711	208.252	185.925	152.644
.15779E+08	225.549	224.768	223.963	209.568	187.384	154.397
.18935E+08	226.541	225.763	224.962	210.629	188.576	155.853
.22090E+08	227.365	226.592	225.794	211.521	189.591	157.108
.25246E+08	228.069	227.298	226.504	212.289	190.476	158.216
.28402E+08	228.677	227.909	227.118	212.960	191.259	159.210
.31558E+08	229.215	228.450	227.662	213.560	191.966	160.117
.63115E+08	232.641	231.903	231.143	217.518	196.817	166.549
.94673E+08	234.476	233.760	233.023	219.807	199.838	170.813
.12623E+09	235.532	234.835	234.118	221.260	201.912	173.916
.15779E+09	236.256	235.576	234.876	222.328	203.506	176.371
.18935E+09	236.476	235.813	235.131	222.899	204.599	178.303
.22090E+09	236.661	236.013	235.346	223.389	205.540	179.963
.25246E+09	236.800	236.165	235.513	223.812	206.381	181.467
.28402E+09	236.287	235.665	235.026	223.564	206.507	182.170
.31558E+09	235.980	235.370	234.742	223.481	206.740	182.893
.63115E+09	228.441	227.931	227.406	218.011	204.096	184.474
.94673E+09	221.262	220.828	220.381	212.404	200.602	184.072
.12623E+10	214.275	213.899	213.513	206.626	196.430	182.207
.15779E+10	207.650	207.322	206.985	200.997	192.124	179.772
.18935E+10	201.818	201.529	201.231	195.949	188.117	177.220
.22090E+10	196.776	196.518	196.253	191.550	184.565	174.847
.25246E+10	191.896	191.663	191.424	187.193	180.895	172.128
.28402E+10	187.980	187.767	187.549	183.691	177.936	169.920
.31558E+10	184.472	184.278	184.078	180.555	175.292	167.958
.63115E+10	167.253	167.139	167.022	164.975	161.884	157.556
.94673E+10	159.543	159.456	159.367	157.815	155.456	152.141
.12623E+11	155.136	155.065	154.992	153.719	151.776	149.040
.15779E+11	151.874	151.813	151.750	150.657	148.982	146.622
.18935E+11	148.695	148.642	148.587	147.633	146.168	144.100
.22090E+11	145.998	145.950	145.901	145.053	143.746	141.899
.25246E+11	143.646	143.603	143.559	142.800	141.630	139.971
.28402E+11	141.597	141.558	141.519	140.832	139.770	138.264
.31558E+11	139.843	139.808	139.772	139.143	138.170	136.789

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:54 JUN 17, 1995 CP= 55122.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP	2517 TEMP	3956 TEMP	4591 TEMP	2441 TEMP	1861 TEMP
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	s20o135	t20o135	i20o135	o20o135	c14i135	c18i135
.10000E-05	35.9885	34.4839	29.8071	26.1377	161.002	161.002
.20000E-05	77.8705	76.5550	72.3233	68.9583	191.392	191.384
31.558	77.8705	76.5549	72.3233	68.9583	191.392	191.384
.31558E+07	104.354	103.154	99.2197	96.0195	210.569	210.394
.63116E+07	109.993	108.820	104.966	101.793	214.593	214.414
.94673E+07	113.536	112.382	108.587	105.435	216.865	216.686
.12623E+08	116.200	115.061	111.312	108.186	218.521	218.343
.15779E+08	118.354	117.227	113.520	110.414	219.771	219.594
.18935E+08	120.163	119.049	115.377	112.291	220.773	220.596
.22090E+08	121.740	120.637	116.998	113.930	221.608	221.432
.25246E+08	123.147	122.054	118.446	115.394	222.324	222.149
.28402E+08	124.419	123.335	119.757	116.722	222.946	222.771
.31558E+08	125.589	124.514	120.965	117.945	223.498	223.323
.63115E+08	134.074	133.068	129.744	126.857	227.065	226.892
.94673E+08	139.915	138.961	135.808	133.030	229.034	228.864
.12623E+09	144.294	143.381	140.366	137.680	230.215	230.049
.15779E+09	147.801	146.923	144.021	141.412	231.051	230.887
.18935E+09	150.732	149.886	147.091	144.560	231.391	231.230
.22090E+09	153.244	152.425	149.721	147.257	231.680	231.522
.25246E+09	155.526	154.732	152.110	149.708	231.917	231.761
.28402E+09	156.890	156.117	153.565	151.218	231.501	231.348
.31558E+09	158.173	157.417	154.925	152.624	231.275	231.126
.63115E+09	164.415	163.805	161.795	159.911	224.528	224.400
.94673E+09	167.326	166.818	165.147	163.569	217.961	217.847
.12623E+10	167.874	167.440	166.014	164.665	211.447	211.347
.15779E+10	167.371	166.996	165.763	164.600	205.211	205.122
.18935E+10	166.306	165.976	164.892	163.873	199.682	199.601
.22090E+10	165.132	164.839	163.875	162.971	194.887	194.812
.25246E+10	163.371	163.107	162.238	161.428	190.209	190.140
.28402E+10	161.920	161.678	160.885	160.148	186.451	186.387
.31558E+10	160.641	160.420	159.695	159.023	183.085	183.025
.63115E+10	153.246	153.116	152.688	152.301	166.479	166.440
.94673E+10	148.837	148.738	148.410	148.116	158.969	158.937
.12623E+11	146.313	146.230	145.960	145.719	154.672	154.645
.15779E+11	144.269	144.197	143.964	143.757	151.480	151.456
.18935E+11	142.035	141.972	141.767	141.587	148.354	148.333
.22090E+11	140.054	139.998	139.814	139.654	145.696	145.677
.25246E+11	138.314	138.263	138.099	137.955	143.378	143.361
.28402E+11	136.758	136.713	136.563	136.433	141.356	141.340
.31558E+11	135.406	135.364	135.226	135.107	139.624	139.609

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 55123.080 TIME= 20:46:54
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 59 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 14 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 135 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 620 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 699 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12	IS AT NODE	701	ITEM= TEMP COMP=	NAME= c10i180
VARIABLE 13	IS AT NODE	703	ITEM= TEMP COMP=	NAME= h10o180
VARIABLE 14	IS AT NODE	666	ITEM= TEMP COMP=	NAME= s10o180
VARIABLE 15	IS AT NODE	659	ITEM= TEMP COMP=	NAME= t10o180
VARIABLE 16	IS AT NODE	765	ITEM= TEMP COMP=	NAME= s16i180
VARIABLE 17	IS AT NODE	844	ITEM= TEMP COMP=	NAME= h16i180
VARIABLE 18	IS AT NODE	846	ITEM= TEMP COMP=	NAME= c16i180
VARIABLE 19	IS AT NODE	848	ITEM= TEMP COMP=	NAME= h16o180
VARIABLE 20	IS AT NODE	811	ITEM= TEMP COMP=	NAME= s16o180
VARIABLE 21	IS AT NODE	804	ITEM= TEMP COMP=	NAME= t16o180
VARIABLE 22	IS AT NODE	910	ITEM= TEMP COMP=	NAME= s22i180
VARIABLE 23	IS AT NODE	989	ITEM= TEMP COMP=	NAME= h22i180
VARIABLE 24	IS AT NODE	991	ITEM= TEMP COMP=	NAME= c22i180
VARIABLE 25	IS AT NODE	993	ITEM= TEMP COMP=	NAME= h22o180
VARIABLE 26	IS AT NODE	956	ITEM= TEMP COMP=	NAME= s22o180
VARIABLE 27	IS AT NODE	949	ITEM= TEMP COMP=	NAME= t22o180
VARIABLE 28	IS AT NODE	4028	ITEM= TEMP COMP=	NAME= i22i180
VARIABLE 29	IS AT NODE	3931	ITEM= TEMP COMP=	NAME= i22o180
VARIABLE 30	IS AT NODE	4565	ITEM= TEMP COMP=	NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts2i180	139.1	.3156E+11	228.8	.2525E+09
3	NSOL	104 TEMP	t02i180	139.1	.3156E+11	228.8	.2525E+09
4	NSOL	29 TEMP	s02i180	139.1	.3156E+11	228.9	.2525E+09
5	NSOL	55 TEMP	h02i180	139.9	.3156E+11	240.5	.2525E+09
6	NSOL	57 TEMP	c02i180	140.3	.3156E+11	246.6	.2525E+09
7	NSOL	59 TEMP	h02o180	140.4	.3156E+11	248.6	.2209E+09
8	NSOL	14 TEMP	s02o180	140.2	.3156E+11	246.6	.2525E+09
9	NSOL	135 TEMP	t02o180	140.2	.3156E+11	246.6	.2525E+09
10	NSOL	620 TEMP	s10i180	140.2	.3156E+11	246.6	.2525E+09
11	NSOL	699 TEMP	h10i180	140.5	.3156E+11	250.1	.1578E+09
12	NSOL	701 TEMP	c10i180	140.5	.3156E+11	249.7	.1578E+09
13	NSOL	703 TEMP	h10o180	140.3	.3156E+11	245.8	.2525E+09
14	NSOL	666 TEMP	s10o180	139.8	.3156E+11	238.3	.2525E+09
15	NSOL	659 TEMP	t10o180	139.8	.3156E+11	238.2	.2525E+09
16	NSOL	765 TEMP	s16i180	139.8	.3156E+11	238.2	.2525E+09
17	NSOL	844 TEMP	h16i180	139.8	.3156E+11	236.7	.2525E+09
18	NSOL	846 TEMP	c16i180	139.5	.3156E+11	231.3	.2525E+09
19	NSOL	848 TEMP	h16o180	139.0	.3156E+11	222.6	.2525E+09
20	NSOL	811 TEMP	s16o180	121.5	.1000E-05	210.1	.3156E+09
21	NSOL	804 TEMP	t16o180	121.5	.1000E-05	210.0	.3156E+09
22	NSOL	910 TEMP	s22i180	121.4	.1000E-05	210.0	.3156E+09
23	NSOL	989 TEMP	h22i180	118.8	.1000E-05	207.1	.3156E+09
24	NSOL	991 TEMP	c22i180	109.7	.1000E-05	200.7	.3156E+09
25	NSOL	993 TEMP	h22o180	93.87	.1000E-05	190.9	.6312E+09
26	NSOL	956 TEMP	s22o180	67.47	.1000E-05	178.4	.9467E+09
27	NSOL	949 TEMP	t22o180	67.37	.1000E-05	178.3	.9467E+09

28 NSOL 4028 TEMP i22i180 31.27 .1000E-05 166.7 .1262E+10
 29 NSOL 3931 TEMP i22o180 30.37 .1000E-05 166.3 .1262E+10
 30 NSOL 4565 TEMP o22o180 26.14 .1000E-05 164.4 .1262E+10

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:57 JUN 17, 1995 CP= 55126.810
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.776	139.787	139.892	159.385	169.379	172.703
.20000E-05	177.233	177.244	177.346	194.717	203.731	206.774
31.558	177.233	177.244	177.346	194.717	203.730	206.773
.31558E+07	201.058	201.069	201.167	217.116	225.368	228.128
.63116E+07	205.880	205.891	205.988	221.667	229.792	232.508
.94673E+07	208.670	208.681	208.778	224.252	232.277	234.960
.12623E+08	210.689	210.699	210.795	226.114	234.063	236.718
.15779E+08	212.244	212.254	212.350	227.531	235.410	238.043
.18935E+08	213.496	213.506	213.601	228.660	236.480	239.092
.22090E+08	214.549	214.560	214.654	229.603	237.368	239.961
.25246E+08	215.455	215.466	215.560	230.407	238.121	240.698
.28402E+08	216.248	216.258	216.351	231.104	238.770	241.330
.31558E+08	216.955	216.965	217.058	231.721	239.342	241.887
.63115E+08	221.597	221.607	221.696	235.657	242.923	245.345
.94673E+08	224.266	224.276	224.362	237.779	244.768	247.095
.12623E+09	225.941	225.950	226.034	239.005	245.767	248.015
.15779E+09	227.153	227.162	227.243	239.842	246.414	248.597
.18935E+09	227.791	227.800	227.879	240.120	246.508	248.627
.22090E+09	228.328	228.336	228.414	240.346	246.576	248.640
.25246E+09	228.783	228.792	228.867	240.515	246.598	248.611
.28402E+09	228.483	228.492	228.565	239.970	245.927	247.897
.31558E+09	228.365	228.374	228.446	239.643	245.494	247.427
.63115E+09	222.078	222.085	222.144	231.542	236.460	238.073
.94673E+09	215.745	215.750	215.801	223.852	228.070	229.446
.12623E+10	209.337	209.342	209.386	216.414	220.098	221.296
.15779E+10	203.189	203.193	203.231	209.411	212.653	213.702
.18935E+10	197.743	197.747	197.780	203.287	206.177	207.109
.22090E+10	193.035	193.038	193.068	198.013	200.614	201.450
.25246E+10	188.416	188.419	188.445	192.933	195.294	196.052
.28402E+10	184.727	184.729	184.753	188.874	191.043	191.738
.31558E+10	181.437	181.440	181.462	185.248	187.240	187.877
.63115E+10	165.281	165.283	165.295	167.575	168.775	169.154
.94673E+10	157.968	157.969	157.979	159.738	160.664	160.954
.12623E+11	153.807	153.808	153.816	155.273	156.040	156.279
.15779E+11	150.709	150.709	150.716	151.978	152.641	152.847
.18935E+11	147.657	147.657	147.663	148.771	149.354	149.534
.22090E+11	145.057	145.058	145.063	146.054	146.575	146.736
.25246E+11	142.791	142.792	142.797	143.687	144.155	144.300
.28402E+11	140.815	140.815	140.820	141.629	142.054	142.185
.31558E+11	139.120	139.120	139.124	139.867	140.257	140.378

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:57 JUN 17, 1995 CP= 55126.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP s02o180	135 TEMP t02o180	620 TEMP s10i180	699 TEMP h10i180	701 TEMP c10i180	703 TEMP h10o180
.10000E-05	169.353	169.351	169.368	176.076	176.530	171.568
.20000E-05	203.883	203.880	203.896	209.483	209.543	204.776
31.558	203.883	203.881	203.896	209.483	209.542	204.776
.31558E+07	225.445	225.442	225.456	230.298	230.078	225.415
.63116E+07	229.866	229.863	229.876	234.598	234.340	229.702
.94673E+07	232.345	232.342	232.355	236.994	236.711	232.100
.12623E+08	234.130	234.127	234.140	238.714	238.414	233.828
.15779E+08	235.476	235.473	235.486	240.004	239.692	235.128
.18935E+08	236.544	236.541	236.554	241.025	240.702	236.159
.22090E+08	237.430	237.427	237.440	241.868	241.536	237.014
.25246E+08	238.181	238.178	238.190	242.582	242.242	237.740
.28402E+08	238.829	238.826	238.838	243.194	242.848	238.364
.31558E+08	239.399	239.396	239.408	243.731	243.381	238.915
.63115E+08	242.963	242.960	242.972	247.049	246.666	242.354
.94673E+08	244.796	244.793	244.804	248.700	248.303	244.120
.12623E+09	245.784	245.781	245.792	249.546	249.142	245.072
.15779E+09	246.422	246.419	246.430	250.067	249.661	245.688
.18935E+09	246.507	246.504	246.514	250.044	249.640	245.765
.22090E+09	246.566	246.564	246.573	250.011	249.609	245.820
.25246E+09	246.581	246.578	246.588	249.941	249.542	245.832
.28402E+09	245.904	245.902	245.911	249.197	248.806	245.170
.31558E+09	245.466	245.463	245.473	248.701	248.316	244.742
.63115E+09	236.390	236.387	236.395	239.152	238.849	235.850
.94673E+09	227.979	227.977	227.984	230.384	230.145	227.583
.12623E+10	219.997	219.995	220.001	222.133	221.945	219.721
.15779E+10	212.545	212.543	212.548	214.454	214.307	212.362
.18935E+10	206.066	206.065	206.069	207.791	207.675	205.950
.22090E+10	200.503	200.501	200.506	202.072	201.978	200.434
.25246E+10	195.187	195.186	195.190	196.626	196.552	195.156
.28402E+10	190.939	190.938	190.942	192.271	192.210	190.933
.31558E+10	187.140	187.139	187.142	188.372	188.321	187.152
.63115E+10	168.694	168.694	168.696	169.467	169.456	168.763
.94673E+10	160.593	160.593	160.594	161.200	161.198	160.668
.12623E+11	155.977	155.977	155.978	156.485	156.487	156.050
.15779E+11	152.584	152.583	152.584	153.027	153.031	152.653
.18935E+11	149.301	149.301	149.302	149.694	149.699	149.368
.22090E+11	146.527	146.527	146.528	146.880	146.886	146.591
.25246E+11	144.112	144.112	144.112	144.430	144.436	144.172
.28402E+11	142.014	142.014	142.015	142.304	142.310	142.070
.31558E+11	140.220	140.220	140.220	140.487	140.493	140.274

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=IP 9000/7XX 20:46:58 JUN 17, 1995 CP= 55126.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	160.099	160.063	160.046	159.959	153.464	141.139
.20000E-05	194.265	194.228	194.209	193.294	186.724	175.002
31.558	194.266	194.228	194.210	193.294	186.724	175.002
.31558E+07	215.480	215.443	215.422	214.027	207.436	196.086
.63116E+07	219.882	219.844	219.824	218.359	211.784	200.531
.94673E+07	222.374	222.337	222.316	220.813	214.263	203.100
.12623E+08	224.181	224.143	224.123	222.591	216.067	204.978
.15779E+08	225.549	225.511	225.491	223.939	217.439	206.418
.18935E+08	226.641	226.604	226.583	225.016	218.541	207.582
.22090E+08	227.552	227.515	227.494	225.915	219.464	208.563
.25246E+08	228.329	228.292	228.272	226.684	220.256	209.411
.28402E+08	229.004	228.967	228.947	227.351	220.946	210.153

.31558E+08	229.602	229.565	229.544	227.942	221.560	210.819
.63115E+08	233.421	233.386	233.366	231.739	225.559	215.237
.94673E+08	235.494	235.460	235.440	233.814	227.810	217.832
.12623E+09	236.704	236.670	236.651	235.038	229.190	219.506
.15779E+09	237.538	237.505	237.486	235.889	230.178	220.744
.18935E+09	237.830	237.798	237.779	236.208	230.638	221.454
.22090E+09	238.071	238.039	238.021	236.473	231.026	222.059
.25246E+09	238.256	238.225	238.207	236.682	231.349	222.584
.28402E+09	237.747	237.716	237.699	236.205	230.981	222.398
.31558E+09	237.449	237.419	237.403	235.933	230.800	222.372
.63115E+09	229.718	229.694	229.680	228.490	224.215	217.183
.94673E+09	222.328	222.307	222.296	221.323	217.699	211.719
.12623E+10	215.137	215.120	215.110	214.310	211.187	206.011
.15779E+10	208.336	208.321	208.312	207.650	204.939	200.424
.18935E+10	202.364	202.351	202.344	201.786	199.397	195.404
.22090E+10	197.214	197.202	197.196	196.718	194.593	191.029
.25246E+10	192.238	192.228	192.222	191.811	189.902	186.688
.28402E+10	188.256	188.247	188.242	187.880	186.141	183.203
.31558E+10	184.694	184.686	184.681	184.362	182.776	180.088
.63115E+10	167.286	167.281	167.279	167.133	166.216	164.633
.94673E+10	159.530	159.526	159.524	159.428	158.735	157.526
.12623E+11	155.107	155.104	155.102	155.031	154.463	153.467
.15779E+11	151.838	151.835	151.834	151.777	151.290	150.431
.18935E+11	148.652	148.650	148.649	148.604	148.179	147.428
.22090E+11	145.951	145.949	145.948	145.910	145.533	144.863
.25246E+11	143.597	143.596	143.595	143.563	143.225	142.626
.28402E+11	141.549	141.547	141.546	141.519	141.213	140.669
.31558E+11	139.795	139.793	139.792	139.769	139.489	138.991

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:58 JUN 17, 1995 CP= 55126.850
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	121.540	121.480	121.444	118.819	109.671	93.8701
.20000E-05	156.933	156.873	156.836	153.700	144.877	130.143
31.558	156.933	156.873	156.836	153.700	144.877	130.143
.31558E+07	178.976	178.915	178.876	175.403	166.807	152.738
.63116E+07	183.616	183.555	183.517	180.004	171.471	157.566
.94673E+07	186.350	186.289	186.251	182.720	174.243	160.472
.12623E+08	188.362	188.301	188.263	184.724	176.300	162.641
.15779E+08	189.924	189.864	189.826	186.283	177.906	164.346
.18935E+08	191.199	191.139	191.101	187.558	179.225	165.756
.22090E+08	192.283	192.223	192.185	188.644	180.353	166.967
.25246E+08	193.227	193.167	193.129	189.591	181.340	168.033
.28402E+08	194.061	194.002	193.964	190.430	182.218	168.984
.31558E+08	194.814	194.754	194.717	191.188	183.013	169.851
.63115E+08	199.942	199.885	199.848	196.385	188.526	175.943
.94673E+08	203.108	203.053	203.017	199.628	192.032	179.920
.12623E+09	205.259	205.205	205.170	201.855	194.487	182.771
.15779E+09	206.897	206.845	206.810	203.562	196.391	185.008
.18935E+09	208.000	207.949	207.916	204.741	197.768	186.716
.22090E+09	208.944	208.894	208.861	205.751	198.949	188.182
.25246E+09	209.781	209.732	209.700	206.652	200.010	189.505
.28402E+09	209.871	209.823	209.792	206.806	200.309	190.039
.31558E+09	210.079	210.032	210.001	207.068	200.693	190.622
.63115E+09	206.952	206.914	206.888	204.471	199.196	190.884
.94673E+09	203.026	202.993	202.972	200.948	196.494	189.482
.12623E+10	198.482	198.455	198.437	196.716	192.887	186.854
.15779E+10	193.858	193.834	193.819	192.346	189.029	183.793
.18935E+10	189.598	189.577	189.563	188.284	185.365	180.751

.22090E+10	185.842	185.824	185.812	184.687	182.091	177.981
.25246E+10	182.003	181.986	181.975	180.977	178.643	174.941
.28402E+10	178.916	178.901	178.891	177.989	175.861	172.480
.31558E+10	176.161	176.147	176.138	175.323	173.380	170.290
.63115E+10	162.304	162.296	162.292	161.845	160.715	158.902
.94673E+10	155.741	155.735	155.731	155.402	154.543	153.159
.12623E+11	151.993	151.988	151.985	151.720	151.014	149.874
.15779E+11	149.159	149.155	149.152	148.927	148.320	147.337
.18935E+11	146.313	146.310	146.307	146.113	145.583	144.723
.22090E+11	143.868	143.865	143.863	143.692	143.219	142.453
.25246E+11	141.733	141.730	141.728	141.576	141.153	140.466
.28402E+11	139.859	139.857	139.855	139.718	139.335	138.711
.31558E+11	138.248	138.246	138.244	138.120	137.769	137.197

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:46:58 JUN 17, 1995 CP= 55126.860
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years.

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	67.4742	67.3670	31.2682	30.3723	26.1377
.20000E-05	105.780	105.666	74.0147	73.0277	68.9325
31.558	105.780	105.667	74.0146	73.0277	68.9325
.31558E+07	129.642	129.526	100.619	99.5840	95.5181
.63116E+07	134.764	134.648	106.381	105.343	101.288
.94673E+07	137.920	137.805	110.013	108.975	104.934
.12623E+08	140.285	140.170	112.743	111.707	107.689
.15779E+08	142.172	142.057	114.955	113.921	109.921
.18935E+08	143.746	143.631	116.815	115.784	111.801
.22090E+08	145.108	144.995	118.437	117.409	113.443
.25246E+08	146.317	146.203	119.886	118.860	114.911
.28402E+08	147.404	147.292	121.196	120.173	116.240
.31558E+08	148.400	148.288	122.402	121.383	117.466
.63115E+08	155.529	155.420	131.155	130.168	126.392
.94673E+08	160.333	160.226	137.193	136.235	132.580
.12623E+09	163.871	163.767	141.725	140.792	137.244
.15779E+09	166.685	166.583	145.355	144.445	140.988
.18935E+09	168.955	168.856	148.398	147.512	144.148
.22090E+09	170.904	170.807	151.003	150.137	146.854
.25246E+09	172.672	172.577	153.370	152.523	149.315
.28402E+09	173.599	173.506	154.802	153.973	150.834
.31558E+09	174.513	174.422	156.144	155.331	152.251
.63115E+09	177.663	177.588	162.812	162.143	159.604
.94673E+09	178.372	178.309	165.998	165.437	163.303
.12623E+10	177.319	177.265	166.740	166.261	164.436
.15779E+10	175.533	175.487	166.385	165.972	164.398
.18935E+10	173.481	173.440	165.431	165.070	163.692
.22090E+10	171.511	171.475	164.346	164.027	162.806
.25246E+10	169.116	169.084	162.656	162.371	161.277
.28402E+10	167.164	167.135	161.260	161.001	160.007
.31558E+10	165.432	165.406	160.032	159.797	158.891
.63115E+10	156.055	156.039	152.870	152.736	152.217
.94673E+10	150.984	150.973	148.541	148.441	148.049
.12623E+11	148.083	148.073	146.065	145.983	145.661
.15779E+11	145.795	145.787	144.052	143.982	143.706
.18935E+11	143.373	143.366	141.843	141.782	141.542
.22090E+11	141.249	141.243	139.881	139.826	139.613
.25246E+11	139.387	139.381	138.157	138.109	137.918
.28402E+11	137.733	137.728	136.614	136.571	136.399
.31558E+11	136.300	136.295	135.273	135.233	135.075

***** ROUTINE COMPLETED ***** CP = 55126.870

```
*****
End of batch input file
*****
```

PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44b.db
FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 29
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

```

*-----*
                        ANSYS RUN COMPLETED
*-----*

                REV. 5.0 A                                HP 9000/7XX

CP TIME          (sec) =      55130.940                TIME = 20:47:02
ELAPSED TIME (sec) =      55830.000                DATE  = 06/17/95

```

WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****

JOB NAME = ucf44w
 MEMORY REQUESTED (MB) = 64.0
 BATCH MODE REQUESTED
 start.ans FILE

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	16777216	64.000 MB	COMMAND LINE
MINIMUM WORK SPACE REQUIRED	=	4718592	18.000 MB	
MINIMUM WORK SPACE RECOMMENDED	=	6702496	25.568 MB	
WORK SPACE OBTAINED	=	16777214	64.000 MB	
BYTES PER WORD	=	4		

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 ERRORS ENCOUNTERED IN EITHER THE DOCUMENTATION OR THE
 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
 ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
 ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

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1 /COM, *****
2 /COM, ANSYS REVISION 5.0A 6/16/1995
3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
4 /COM, *****
5 /COM, *
6 /COM, * File name: ucf44w.inp *
7 /COM, * 44 BWR UCF with Low T.L. Disposal Container *
8 /COM, * Helium Fill Gas *
9 /COM, *
10 /COM, * Material Property file: props01.dat *
11 /COM, *
12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes) *
13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
14 /COM, *
15 /COM, * SNF Heat Loads file: bwr1049.dat *
16 /COM, * SNF Type: 10 years old, 49000 MWd/MTU... *
17 /COM, *
18 /COM, * Surface Temp. file: c21w5a.parm *
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19 /COM, *      25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 45.0 m *
22 /COM, *      WP c/c spacing = 32.331 m *
23 /COM, *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,parm,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21w5a,parm,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 DCRAD=1.5260/2.0
68 OWALL=0.0500
69 IWALL=0.0200
70 DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 GCORL=320.0/1000.0
73 GCORS=181.6/1000.0
74 GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 HCELL=153.0/1000.0/2.0
79 SWALL=3.5/1000.0
80 TWALL=20.0/1000.0
81 THWLL=TWALL/2.0
82 /COM,
83 ACTVL=150.0*2.54/100.0
84 PEAKF=1.40
85 /COM, Define calculated parameters
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLU = assy_volume=cell_width^2*active_length

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89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.                (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.         (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLL=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,          ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,          MI45=MIRAD/SQRT(2.0)
123 /COM,          MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCIRD-OWALL)/SQRT(2.0)
126 DO45=DCIRD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,          *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01,dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049,dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLU),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTEMP
181 MPTEMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTEMP
188 MPTEMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTEMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Define new material 15 for low thermal loading
204 /COM, outer barrier of 70/30 Copper Nickel (C71500)
205 /COM, Density: DENS (kg/m^3)
206 /COM, Conductivity: KXX (W/m/K)
207 /COM, Specific Heat: C (J/kg/K)
208 MPTEMP
209 MPTEMP, 1, .00000E+00,
210 /COM, Density (lb/in^3 converted to kg/m^3)
211 MPDATA,DENS,15, 1,(0.323*2.768E+04),
212 /COM, Specific Heat (Btu/lb/F converted to J/kg/K)
213 MPDATA, C,15, 1,(0.09/2.3886E-04),
214 /COM, Conductivity (Btu/hr/ft/F converted to W/m/K)
215 MPTEMP
216 MPTEMP, 1, (5.0/9.0*(68.0-32.0)), (5.0/9.0*(212.0-32.0)),
217 MPTEMP, 3, (5.0/9.0*(392.0-32.0)), (5.0/9.0*(572.0-32.0)),
218 MPTEMP, 5, (5.0/9.0*(752.0-32.0)), (5.0/9.0*(932.0-32.0)),
219 MPTEMP, 7, (5.0/9.0*(1112.0-32.0)), (5.0/9.0*(1292.0-32.0)),
220 MPDATA, KXX,15, 1, (17.0*1.7307), (16.9*1.7307),
221 MPDATA, KXX,15, 3, (19.7*1.7307), (22.3*1.7307),
222 MPDATA, KXX,15, 5, (24.9*1.7307), (27.8*1.7307),
223 MPDATA, KXX,15, 7, (30.7*1.7307), (33.6*1.7307),
224 /COM, *****
225 /COM, Construct geometry for Disposal Container
226 /COM,
227 /COM, Define center and axis keypoints for waste package
228 /COM, Also, create placeholder keypoints and lines

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229 /COM,          (K's 1,2,3,4,5,6,7,8)
230 /COM,          (L's 1,2,3,4)
231 K,1,0.0,0.0,0.0,
232 K,2,0.0,0.0,0.0,1.0,
233 K,3,0.0,0.0,0.0,1.3,
234 K,4,0.0,0.0,0.0,1.4,
235 K,5,0.0,0.0,0.0,1.5,
236 K,6,0.0,0.0,0.0,1.6,
237 K,7,0.0,0.0,0.0,1.7,
238 K,8,0.0,0.0,0.0,1.8,
239 L,3,4,
240 L,4,5,
241 L,5,6,
242 L,6,7,
243 /COM,          Define disposal container outer radius and material interface
244 /COM,          (K's 9,10,11,12,13,14)
245 /COM,          (L's 5,6,7,8,9,10,11)
246 /COM,          (A's 1,2)
247 K, 9,          0.0,          (0.0-DCRAD),0.0,
248 K,10,          DCRAD,          0.0,0.0,
249 K,11,          0.0,          DCRAD,0.0,
250 K,12,          0.0,          (OWALL-DCRAD),0.0,
251 K,13,          (DCRAD-OWALL), 0.0,0.0,
252 K,14,          0.0,          (DCRAD-OWALL),0.0,
253 L,10,13,
254 LARC,10, 9,1,          DCRAD,
255 LARC,11,10,1,          DCRAD,
256 LARC,13,12,1,          (DCRAD-OWALL),
257 LARC,14,13,1,          (DCRAD-OWALL),
258 L,11,14,
259 L, 9,12,
260 AL, 5, 6,11, 8,
261 AL,10, 7, 5, 9,
262 /COM,          *****
263 /COM,          Define UCF shell inner edge and area
264 /COM,          (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
265 /COM,          ( 31,32,33,34,35)
266 /COM,          (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
267 /COM,          ( 28,29,30,31,32,33,34)
268 /COM,          (A's 3,4)
269 K,15, 0.0,          DCIRD,0.0,
270 K,16, GX22,          GY22,0.0,
271 K,17, GX23,          GY23,0.0,
272 K,18, GX24,          GY24,0.0,
273 K,19, GX25,          GY25,0.0,
274 K,20, DI45,          DI45,0.0,
275 K,21, GY25,          GX25,0.0,
276 K,22, GY24,          GX24,0.0,
277 K,23, GY23,          GX23,0.0,
278 K,24, GY22,          GX22,0.0,
279 K,25,DCIRD,          0.0,0.0,
280 K,26, GY22, (0.0-GX22),0.0,
281 K,27, GY23, (0.0-GX23),0.0,
282 K,28, GY24, (0.0-GX24),0.0,
283 K,29, GY25, (0.0-GX25),0.0,
284 K,30, DI45, (0.0-DI45),0.0,
285 K,31, GX25, (0.0-GY25),0.0,
286 K,32, GX24, (0.0-GY24),0.0,
287 K,33, GX23, (0.0-GY23),0.0,
288 K,34, GX22, (0.0-GY22),0.0,
289 K,35, 0.0,(0.0-DCIRD),0.0,
290 L,14,15,
291 LARC,16,15,1,DCIRD,
292 LARC,17,16,1,DCIRD,
293 LARC,18,17,1,DCIRD,
294 LARC,19,18,1,DCIRD,
295 LARC,20,19,1,DCIRD,
296 LARC,21,20,1,DCIRD,
297 LARC,22,21,1,DCIRD,
298 LARC,23,22,1,DCIRD,

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299 LARC,24,23,1,DCIRD,
300 LARC,25,24,1,DCIRD,
301 LARC,26,25,1,DCIRD,
302 LARC,27,26,1,DCIRD,
303 LARC,28,27,1,DCIRD,
304 LARC,29,28,1,DCIRD,
305 LARC,30,29,1,DCIRD,
306 LARC,31,30,1,DCIRD,
307 LARC,32,31,1,DCIRD,
308 LARC,33,32,1,DCIRD,
309 LARC,34,33,1,DCIRD,
310 LARC,35,34,1,DCIRD,
311 L,12,35,
312 L,25,13,
313 LSEL,S,LINE,,12,22,
314 LSEL,A,LINE,,9,
315 LSEL,A,LINE,,34,
316 AL,ALL,
317 LSEL,S,LINE,,23,33,
318 LSEL,A,LINE,,8,
319 LSEL,A,LINE,,34,
320 AL,ALL,
321 LSEL,ALL,
322 /COM, *****
323 /COM, Define thermal shunts
324 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
325 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
326 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
327 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
328 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
329 /COM, ( 84,85,86,87,88,89,90,91,92)
330 /COM, (A's 5 - 26)
331 /COM,
332 /COM, horizontal thermal shunt
333 K,36, 0.0, (0.0-THWLL),0.0,
334 K,37, 0.0, THWLL,0.0,
335 K,38, THWLL, (0.0-THWLL),0.0,
336 K,39, THWLL, 0.0,0.0,
337 K,40, THWLL, THWLL,0.0,
338 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
339 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
340 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
341 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
342 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
343 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
344 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
345 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
346 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
347 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
348 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
349 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
350 /COM, vertical thermal shunt
351 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
352 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
353 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
354 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
355 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
356 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
357 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
358 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
359 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
360 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
361 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
362 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
363 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
364 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
365 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
366 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
367 /COM, Lines; shunt widths, horizontal then vertical: (35-57)
368 L,36, 1,

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369 L, 1,37,
370 L,38,39,
371 L,39,40,
372 L,41,42,
373 L,42,43,
374 L,44,45,
375 L,45,46,
376 L,47,48,
377 L,48,49,
378 L,50,51,
379 L,51,52,
380 L,53,54,
381 L,55,56,
382 L,57,58,
383 L,59,60,
384 L,37,40,
385 L, 1,39,
386 L,36,38,
387 L,61,62,
388 L,63,64,
389 L,65,66,
390 L,67,68,
391 /COM, Lines; shunt edges, horizontal then vertical: (58-92)
392 L,38,41,
393 L,39,42,
394 L,40,43,
395 L,41,44,
396 L,42,45,
397 L,43,46,
398 L,44,47,
399 L,45,48,
400 L,46,49,
401 L,47,50,
402 L,48,51,
403 L,49,52,
404 L,26,50,
405 L,25,51,
406 L,52,24,
407 L,15,53,
408 L,16,54,
409 L,53,55,
410 L,54,56,
411 L,55,57,
412 L,56,58,
413 L,57,59,
414 L,58,60,
415 L,59,37,
416 L,60,40,
417 L,36,61,
418 L,38,62,
419 L,61,63,
420 L,62,64,
421 L,63,65,
422 L,64,66,
423 L,65,67,
424 L,66,68,
425 L,67,35,
426 L,68,34,
427 /COM, define areas for thermal shunts
428 AL,35,53,37,52,
429 AL,36,52,38,51,
430 AL,37,58,39,59,
431 AL,38,59,40,60,
432 AL,39,61,41,62,
433 AL,40,62,42,63,
434 AL,41,64,43,65,
435 AL,42,65,44,66,
436 AL,43,67,45,68,
437 AL,44,68,46,69,
438 AL,45,70,23,71,

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439 AL,46,71,22,72,
440 AL,73,47,74,13,
441 AL,75,48,76,47,
442 AL,77,49,78,48,
443 AL,79,50,80,49,
444 AL,81,51,82,50,
445 AL,83,54,84,53,
446 AL,85,55,86,54,
447 AL,87,56,88,55,
448 AL,89,57,90,56,
449 AL,91,32,92,57,
450 /COM, *****
451 /COM,          Define tube guides
452 /COM,          (K's 69 - 92)
453 /COM,          (L's 93 - 136)
454 /COM,          (A's 27 - 46)
455 /COM,
456 /COM,          top guide
457 K,69,          (THWLL+1.0*PITCH),          (THWLL+4.0*PITCH),0.0,
458 K,70,(THWLL+1.0*PITCH+GWALL),          (THWLL+4.0*PITCH),0.0,
459 K,71,          (THWLL+1.0*PITCH),          (THWLL+3.0*PITCH),0.0,
460 K,72,(THWLL+1.0*PITCH+GWALL), (THWLL+3.0*PITCH+GWALL),0.0,
461 K,73,          (THWLL+2.0*PITCH),          (THWLL+3.0*PITCH),0.0,
462 K,74,          (THWLL+2.0*PITCH), (THWLL+3.0*PITCH+GWALL),0.0,
463 K,75,          (THWLL+3.0*PITCH),          (THWLL+2.0*PITCH),0.0,
464 K,76,(THWLL+3.0*PITCH+GWALL),          (THWLL+2.0*PITCH),0.0,
465 K,77,          (THWLL+3.0*PITCH),          (THWLL+1.0*PITCH),0.0,
466 K,78,(THWLL+3.0*PITCH+GWALL), (THWLL+1.0*PITCH+GWALL),0.0,
467 K,79,          (THWLL+4.0*PITCH),          (THWLL+1.0*PITCH),0.0,
468 K,80,          (THWLL+4.0*PITCH), (THWLL+1.0*PITCH+GWALL),0.0,
469 /COM,          bottom guide
470 K,81,          (THWLL+4.0*PITCH),          (-1.0*PITCH-THWLL),0.0,
471 K,82,          (THWLL+4.0*PITCH),(-1.0*PITCH-GWALL-THWLL),0.0,
472 K,83,          (THWLL+3.0*PITCH),          (-1.0*PITCH-THWLL),0.0,
473 K,84,(THWLL+3.0*PITCH+GWALL),(-1.0*PITCH-GWALL-THWLL),0.0,
474 K,85,          (THWLL+3.0*PITCH),          (-2.0*PITCH-THWLL),0.0,
475 K,86,(THWLL+3.0*PITCH+GWALL),          (-2.0*PITCH-THWLL),0.0,
476 K,87,          (THWLL+2.0*PITCH),          (-3.0*PITCH-THWLL),0.0,
477 K,88,          (THWLL+2.0*PITCH),(-3.0*PITCH-GWALL-THWLL),0.0,
478 K,89,          (THWLL+1.0*PITCH),          (-3.0*PITCH-THWLL),0.0,
479 K,90,(THWLL+1.0*PITCH+GWALL),(-3.0*PITCH-GWALL-THWLL),0.0,
480 K,91,          (THWLL+1.0*PITCH),          (-4.0*PITCH-THWLL),0.0,
481 K,92,(THWLL+1.0*PITCH+GWALL),          (-4.0*PITCH-THWLL),0.0,
482 /COM,
483 /COM,          top guide
484 L,69,17,
485 L,18,70,
486 L,71,69,
487 L,70,72,
488 L,73,71,
489 L,72,74,
490 L,20,73,
491 L,74,19,
492 L,75,20,
493 L,21,76,
494 L,77,75,
495 L,76,78,
496 L,79,77,
497 L,78,80,
498 L,23,79,
499 L,80,22,
500 /COM,          bottom guide
501 L,81,27,
502 L,28,82,
503 L,83,81,
504 L,82,84,
505 L,85,83,
506 L,84,86,
507 L,30,85,
508 L,86,29,

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509 L,87,30,
510 L,31,88,
511 L,89,87,
512 L,88,90,
513 L,91,89,
514 L,90,92,
515 L,33,91,
516 L,92,32,
517 /COM,          Guide thickness lines
518 L,69,70,
519 L,71,72,
520 L,73,74,
521 L,75,76,
522 L,77,78,
523 L,79,80,
524 L,82,81,
525 L,84,83,
526 L,86,85,
527 L,88,87,
528 L,90,89,
529 L,92,91,
530 /COM,          Guide steel
531 AL, 93,125, 94, 15,
532 AL, 95,126, 96,125,
533 AL, 97,127, 98,126,
534 AL, 99, 17,100,127,
535 AL,101,128,102, 18,
536 AL,103,129,104,128,
537 AL,105,130,106,129,
538 AL,107, 20,108,130,
539 AL,109,131,110, 25,
540 AL,111,132,112,131,
541 AL,113,133,114,132,
542 AL,115, 27,116,133,
543 AL,117,134,118, 28,
544 AL,119,135,120,134,
545 AL,121,136,122,135,
546 AL,123, 30,124,136,
547 /COM,          Guide gaps
548 AL, 16, 94, 96, 98,100,
549 AL, 19,102,104,106,108,
550 AL, 26,110,112,114,116,
551 AL, 29,118,120,122,124,
552 /COM,          *****
553 /COM,          Define shell gaps at the exterior of the tube array
554 /COM,          (L's 137 - 140)
555 /COM,          (A's 47 - 50)
556 /COM,
557 L, 54, 69,
558 L, 79, 52,
559 L, 50, 81,
560 L, 91, 68,
561 /COM,
562 AL, 14, 74,137, 93,
563 AL, 21,107,138, 72,
564 AL, 24, 70,139,109,
565 AL, 31,123,140, 92,
566 /COM,          *****
567 /COM,          Define center full-tube
568 /COM,          (K's 93 - 100)
569 /COM,          (L's 141 - 152)
570 /COM,          (A's 51 - 56)
571 K, 93,          THWLL,          THWLL,0.0,
572 K, 94,          THWLL,          (THWLL+PITCH),0.0,
573 K, 95,          (THWLL+PITCH), (THWLL+PITCH),0.0,
574 K, 96,          (THWLL+PITCH),          THWLL,0.0,
575 K, 97,          (THWLL+SWALL), (THWLL+SWALL),0.0,
576 K, 98,          (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
577 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
578 K,100,(PITCH+THWLL-SWALL),          (THWLL+SWALL),0.0,

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579 L, 93, 97,
580 L, 94, 98,
581 L, 96, 100,
582 L, 95, 99,
583 L, 96, 93,
584 L, 100, 97,
585 L, 98, 99,
586 L, 94, 95,
587 L, 93, 94,
588 L, 97, 98,
589 L, 99, 100,
590 L, 95, 96,
591 AL, 149, 141, 150, 142,
592 AL, 145, 143, 146, 141,
593 AL, 152, 144, 151, 143,
594 AL, 148, 142, 147, 144,
595 AL, 150, 146, 151, 147,
596 /COM, *****
597 /COM, Set element shapes and sizes for tubes
598 /COM, 8x8 mesh in fuel with 2
599 /COM, divisions per tube layer
600 ESHAPE, 2,
601 ESIZE, 1,
602 LSEL, S, LINE, 145, 152, 1,
603 LESIZE, ALL, 8,
604 LSEL, S, LINE, 141, 144, 1,
605 LESIZE, ALL, 2,
606 LSEL, ALL,
607 /COM,
608 /COM, Mesh areas
609 /COM, first fuel, then stainless tubes
610 MAT, 14,
611 TYPE, 1,
612 AMESH, 55,
613 MAT, 1,
614 TYPE, 1,
615 AMESH, 51, 54, 1,
616 /COM, *****
617 /COM, Copy tube mesh
618 /COM,
619 /COM, center full tube side, above, and below
620 /COM, (A's 56 - 60 = Side 1)
621 AGEN, 2, 51, 55, 1, (1.0 * PITCH), 0.0, 0.0, 0.0,
622 /COM, (A's 61 - 65 = Side 2)
623 AGEN, 2, 51, 55, 1, (2.0 * PITCH), 0.0, 0.0, 0.0,
624 /COM, (A's 66 - 70 = Side 3)
625 AGEN, 2, 51, 55, 1, (3.0 * PITCH), 0.0, 0.0, 0.0,
626 /COM,
627 /COM, (A's 71 - 75 = up 1)
628 AGEN, 2, 51, 55, 1, 0.0, (1.0 * PITCH), 0.0, 0.0,
629 /COM, (A's 76 - 80 = up 2)
630 AGEN, 2, 51, 55, 1, 0.0, (2.0 * PITCH), 0.0, 0.0,
631 /COM, (A's 81 - 85 = up 3)
632 AGEN, 2, 51, 55, 1, 0.0, (3.0 * PITCH), 0.0, 0.0,
633 /COM,
634 /COM, (A's 86 - 90 = down 1)
635 AGEN, 2, 51, 55, 1, 0.0, (-1.0 * PITCH - TWALL), 0.0, 0.0,
636 /COM, (A's 91 - 95 = down 2)
637 AGEN, 2, 51, 55, 1, 0.0, (-2.0 * PITCH - TWALL), 0.0, 0.0,
638 /COM, (A's 96 - 100 = down 3)
639 AGEN, 2, 51, 55, 1, 0.0, (-3.0 * PITCH - TWALL), 0.0, 0.0,
640 /COM, (A's 101 - 105 = down 4)
641 AGEN, 2, 51, 55, 1, 0.0, (-4.0 * PITCH - TWALL), 0.0, 0.0,
642 /COM,
643 /COM, (A's 106 - 110 = up 1)
644 AGEN, 2, 56, 60, 1, 0.0, (1.0 * PITCH), 0.0, 0.0,
645 /COM, (A's 111 - 115 = up 2)
646 AGEN, 2, 56, 60, 1, 0.0, (2.0 * PITCH), 0.0, 0.0,
647 /COM,
648 /COM, (A's 116 - 120 = down 1)

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649 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
650 /COM, (A's 121 - 125 = down 2)
651 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
652 /COM, (A's 126 - 130 = down 3)
653 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
654 /COM,
655 /COM, (A's 131 - 135 = up 1)
656 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
657 /COM, (A's 136 - 140 = up 2)
658 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
659 /COM,
660 /COM, (A's 141 - 145 = down 1)
661 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
662 /COM, (A's 146 - 150 = down 2)
663 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
664 /COM, (A's 151 - 155 = down 3)
665 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
666 /COM,
667 /COM, (A's 156 - 160 = down 1)
668 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
669 /COM,
670 /COM, *****
671 /COM, Create mesh in tube guides, thermal shunts
672 /COM, Set mesh size for gaps.....
673 ESIZE,,2,
674 LSEL,S,LINE,, 35, 57,1,
675 LSEL,A,LINE,,125,136,1,
676 LSEL,A,LINE,, 13, 15,2,
677 LSEL,A,LINE,, 17, 18,1,
678 LSEL,A,LINE,, 20, 22,2,
679 LSEL,A,LINE,, 23, 25,2,
680 LSEL,A,LINE,, 27, 28,1,
681 LSEL,A,LINE,, 30, 32,2,
682 LESIZE,ALL,,, 2,
683 LSEL,S,LINE,, 70, 74,1,
684 LSEL,A,LINE,, 91, 94,1,
685 LSEL,A,LINE,,107,110,1,
686 LSEL,A,LINE,,123,124,1,
687 LESIZE,ALL,,, 3,
688 LSEL,S,LINE,, 14, 21,7,
689 LSEL,A,LINE,, 24, 31,7,
690 LSEL,A,LINE,, 58, 69,1,
691 LSEL,A,LINE,, 75, 90,1,
692 LSEL,A,LINE,, 95,106,1,
693 LSEL,A,LINE,,111,122,1,
694 LSEL,A,LINE,,137,140,1,
695 LESIZE,ALL,,, 8,
696 LSEL,S,LINE,, 16, 19,3,
697 LSEL,A,LINE,, 26, 29,3,
698 LESIZE,ALL,,, 16,
699 /COM, MESH CORNER GUIDES
700 ESHAPE,2,
701 ESIZE,,1,
702 MAT,2,
703 TYPE,1,
704 AMESH,27,42,1,
705 /COM, MESH THERMAL SHUNTS
706 ESHAPE,2,
707 ESIZE,,1,
708 MAT,13,
709 TYPE,1,
710 AMESH, 5,26,1,
711 NUMMRG,NODE,
712 NUMMRG,KP,
713 /COM, *****
714 /COM, Create mesh in UCF inner shell
715 /COM, (L's 105,108 ????)
716 LSEL,S,LINE,,13,22,1,
717 LCCAT,ALL,
718 LSEL,S,LINE,,23,32,1,

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719 LCCAT,ALL,
720 LSEL,ALL,
721 LESIZE,8,,,60,
722 LESIZE,9,,,60,
723 LESIZE,12,,,3,
724 LESIZE,33,,,3,
725 MAT,2,
726 TYPE,1,
727 AMESH,3,4,1
728 /COM,          Delete concatanated lines
729 /COM,          (L's freed up 105,108 ????)
730 /COM, LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES
731 /COM,
732 LSEL,S,LINE,,6,7,1,
733 LESIZE,ALL,,,60,
734 LSEL,ALL,
735 LESIZE,5,,,3,
736 LESIZE,10,,,3,
737 LESIZE,11,,,3,
738 MAT,15,
739 TYPE,1,
740 AMESH,1,2,1,
741 NUMMRG,NODE,
742 NUMMRG,KP,
743 /COM, *****
744 /COM,          Create mesh in empty basket spaces
745 ESIZE,0.1,
746 ESHAPE,0,
747 MAT,7,
748 TYPE,1,
749 AMESH,43,50,1,
750 NUMMRG,NODE,
751 NUMMRG,KP,
752 /COM, *****
753 /COM,          Create radiation surface elements
754 /COM,          Basket spaces
755 MAT,2,
756 TYPE,17,
757 LMESH,14,16,2,
758 LMESH,19,21,2,
759 LMESH,24,26,2,
760 LMESH,29,31,2,
761 LMESH,93,94,1,
762 LMESH,96,124,2,
763 LMESH,107,109,2,
764 LMESH,123,
765 MAT,1,
766 TYPE,17,
767 LMESH,137,140,1,
768 MAT,13,
769 TYPE,17,
770 LMESH,70,72,2,
771 LMESH,74,
772 LMESH,92,
773 /COM,
774 FINISH
775 /COM, *****
776 /COM,          Create element mesh plots to illustrate model
777 /COM,          View mesh for entire model
778 /RESET
779 /TRIAD,OFF,
780 /NUM,1,
781 /PNUM,MAT,1,
782 /TYPE,HIDP,
783 /GLINE,,0,
784 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
785 /TITLE,44 BWR UCF/Waste Package - 1/2 FEM Model
786 /SHOW,meshfull,graph,1,8,
787 EPLOT
788 ESEL,U,MAT,,7,

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789 /SHOW,meshgap,grph,1,8,
790 EPLOT
791 /COM,          View mesh for radiation substructure
792 /PNUM,MAT, 0,
793 /PNUM,TYPE, 1,
794 ESEL,S,TYPE,,17,
795 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
796 /SHOW,meshrad,grph,1,8,
797 EPLOT
798 ESEL,ALL,
799 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
800 /COM,          *****
801 /COM,          Generate super-elements
802 /AUX12,
803 ESEL,S,TYPE,,17,
804 NSLE,S,
805 STEF,5.67E-8,
806 GEOM,1,0,
807 VTYPE,0,800,
808 WRITE,spaces,
809 ESEL,ALL,
810 NSEL,ALL,
811 FINISH
812 /PREP7,
813 TYPE,18,
814 SE,spaces,
815 /COM,          Delete radiation edge elements
816 LSEL,S,TYPE,,17,
817 LCLEAR,ALL,
818 LSEL,ALL,
819 FINISH
820 /COM,          *****
821 /COM,          Set solution parameters and apply B.C.'s
822 /COM,
823 /COM,          Solve steady-state for initial conditions
824 /COM,          with WP surface equal to drift ambient
825 /COM,          temperature from repository model.
826 /SOLU
827 ANTYPE,TRAN,NEW,
828 NROPT,AUTO,
829 TRNOPT,FULL,
830 TOFFST,273.15,
831 LSEL,S,LINE,,6,
832 LSEL,A,LINE,,7,
833 NSLL,S,1,
834 D,ALL,TEMP,DFAMBT,
835 LSEL,ALL,
836 NSEL,ALL,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,1e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM,          Solve steady-state for initial conditions
848 /COM,          with WP surface temperatures from repository
849 /COM,          steady-state solution.
850 LSEL,S,LINE,,6,
851 LSEL,A,LINE,,7,
852 NSLL,S,1,
853 DDELE,ALL,TEMP,
854 LSEL,ALL,
855 NSEL,ALL,
856 DK,11,TEMP,(WPTOP(TM_START)),,1,
857 DK,10,TEMP,(WPSID(TM_START)),,1,
858 DK, 9,TEMP,(WPBOT(TM_START)),,1,

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859 ASEL,S,MAT,,14,
860 ESLA,S,
861 BFE,ALL,HGEN,,(FUEL(TM_START)),
862 ASEL,ALL,
863 ESEL,ALL,
864 TIMINT,OFF,
865 TIME,2e-6,
866 AUTOTS,ON,
867 KBC,0,
868 SOLVE
869 /COM, *****
870 /COM, Set time integration parameters
871 TIMINT,ON,
872 AUTOTS,ON,
873 /COM, Time substep ranges from 10 sec to 1/4 loadstep
874 NSUBST,10,40,5,ON
875 /COM, Begin Transient
876 /COM, Apply loads and solve for 0 to .9 years
877 *DO,TM,TM_START,TME0,TM10
878 TIME,TM,
879 ASEL,S,MAT,,14,
880 ESLA,S,
881 BFE,ALL,HGEN,,(FUEL(TM)),
882 ASEL,ALL
883 ESEL,ALL
884 DK,11,TEMP,(WPTOP(TM)),,1,
885 DK,10,TEMP,(WPSID(TM)),,1,
886 DK, 9,TEMP,(WPBOT(TM)),,1,
887 SOLVE
888 *ENDDO
889 /COM, Apply loads and solve for 1 to 9 years
890 *DO,TM,TME1,TME9,TM11
891 TIME,TM,
892 ASEL,S,MAT,,14,
893 ESLA,S,
894 BFE,ALL,HGEN,,(FUEL(TM)),
895 ASEL,ALL
896 ESEL,ALL
897 DK,11,TEMP,(WPTOP(TM)),,1,
898 DK,10,TEMP,(WPSID(TM)),,1,
899 DK, 9,TEMP,(WPBOT(TM)),,1,
900 SOLVE
901 *ENDDO
902 /COM, Apply loads and solve for 10 to 90 years
903 *DO,TM,TME10,TME90,TM110
904 TIME,TM,
905 ASEL,S,MAT,,14,
906 ESLA,S,
907 BFE,ALL,HGEN,,(FUEL(TM)),
908 ASEL,ALL
909 ESEL,ALL
910 DK,11,TEMP,(WPTOP(TM)),,1,
911 DK,10,TEMP,(WPSID(TM)),,1,
912 DK, 9,TEMP,(WPBOT(TM)),,1,
913 SOLVE
914 *ENDDO
915 /COM, Apply loads and solve for 100 to 1000 years
916 *DO,TM,TME100,TME1000,TM1100
917 TIME,TM,
918 ASEL,S,MAT,,14,
919 ESLA,S,
920 BFE,ALL,HGEN,,(FUEL(TM)),
921 ASEL,ALL
922 ESEL,ALL
923 DK,11,TEMP,(WPTOP(TM)),,1,
924 DK,10,TEMP,(WPSID(TM)),,1,
925 DK, 9,TEMP,(WPBOT(TM)),,1,
926 SOLVE
927 *ENDDO
928 FINISH

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929 SAVE,
930 /COM, *****
931 /COM, Create element contour plots of solution results
932 /COM,
933 /COM, Sort through solution results for time of max temp.
934 /POST26,
935 NSOL,2,(NODE((THWLL+SCELL),(-1.0*THWLL-SCELL),0.0)),TEMP,,peakclad,
936 STORE,NEW,
937 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
938 FINISH
939 /POST1,
940 /COM, Create temperature contour plots of WP at peak
941 /RESET
942 /TRIAD,OFF,
943 /NUM, 1,
944 /PNUM,MAT, 1,
945 /TYPE,HIDP,
946 /GLINE,, -1,
947 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
948 ESEL,U,MAT,,7,
949 SET,NEAR,,,TMTMAX,
950 /TITLE, 44 BWR UCF/WP at Time of Peak Temp. (%TMTMAX/3.15576E7% years)
951 /SHOW,solupk,grph,0,8,
952 /CONTOUR,1,128,AUTO,
953 PLNSOL,TEMP,
954 /COM, Create temperature contour plots at 10, 50, and 100 yrs
955 SET,NEAR,,,TME10,
956 /TITLE, 44 BWR UCF/WP at 10 years
957 /SHOW,solu10,grph,0,8,
958 /CONTOUR,1,128,USER,
959 PLNSOL,TEMP,
960 SET,NEAR,,,TME50,
961 /TITLE, 44 BWR UCF/WP at 50 years
962 /SHOW,solu50,grph,0,8,
963 /CONTOUR,1,128,USER,
964 PLNSOL,TEMP,
965 SET,NEAR,,,TME100,
966 /TITLE, 44 BWR UCF/WP at 100 years
967 /SHOW,solu100,grph,0,8,
968 /CONTOUR,1,128,USER,
969 PLNSOL,TEMP,
970 ESEL,ALL,
971 FINISH
972 /COM, *****
973 /COM, Set some needed variable values:
974 /COM,
975 DATM=THWLL+SCELL
976 DAT1=DATM+PITCH
977 DAT2=DATM+(2.0*PITCH)
978 DAT3=DATM+(3.0*PITCH)
979 /COM,
980 /COM, *****
981 /COM, Print time/temperature output at specific locations
982 /COM, Save profile from center to edge
983 /COM,
984 /COM, Variable Legend: A01i000
985 /COM, c = center of assembly
986 /COM, h = halfway between center and tube
987 /COM, s = inside structural stainless tube layer
988 /COM, t = stainless tube cladding
989 /COM, g = tube guide
990 /COM, i = inner barrier of DC
991 /COM, o = outer barrier of DC
992 /COM, ## = ID number of assembly (01 is center)
993 /COM, i = side of assembly toward center of WP
994 /COM, o = side of assembly toward edge of WP
995 /COM, 000 = profile center down
996 /COM, 045 = profile 45 deg down
997 /COM, 090 = profile center side
998 /COM, 135 = profile 45 deg up

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999 /COM, 180 = profile center up
1000 /POST26,
1001 NUMVAR,30,
1002 /COM,
1003 /COM, *****
1004 /COM, *Temperature Profile from center offset to bottom of WP (0 deg.)*
1005 /COM, *****
1006 NSOL, 2, (NODE( DATM, 0.0,0.0)),TEMP,,ts1i000,
1007 NSOL, 3, (NODE( DATM, (0.0-THWLL),0.0)),TEMP,,t01i000,
1008 NSOL, 4, (NODE( DATM, (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
1009 NSOL, 5, (NODE( DATM, (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
1010 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i000,
1011 NSOL, 7, (NODE( DATM, (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
1012 NSOL, 8, (NODE( DATM, (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
1013 NSOL, 9, (NODE( DATM, (0.0-DATM-SCELL),0.0)),TEMP,,t01o000,
1014 NSOL, 10, (NODE( DATM, (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
1015 NSOL, 11, (NODE( DATM, (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
1016 NSOL, 12, (NODE( DATM, (0.0-DAT1),0.0)),TEMP,,c09i000,
1017 NSOL, 13, (NODE( DATM, (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
1018 NSOL, 14, (NODE( DATM, (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
1019 NSOL, 15, (NODE( DATM, (0.0-DAT1-SCELL),0.0)),TEMP,,t09o000,
1020 NSOL, 16, (NODE( DATM, (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,
1021 NSOL, 17, (NODE( DATM, (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1022 NSOL, 18, (NODE( DATM, (0.0-DAT2),0.0)),TEMP,,c15i000,
1023 NSOL, 19, (NODE( DATM, (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1024 NSOL, 20, (NODE( DATM, (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1025 NSOL, 21, (NODE( DATM, (0.0-DAT2-SCELL),0.0)),TEMP,,t15o000,
1026 NSOL, 22, (NODE( DATM, (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1027 NSOL, 23, (NODE( DATM, (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1028 NSOL, 24, (NODE( DATM, (0.0-DAT3),0.0)),TEMP,,c21i000,
1029 NSOL, 25, (NODE( DATM, (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1030 NSOL, 26, (NODE( DATM, (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1031 NSOL, 27, (NODE( DATM, (0.0-DAT3-SCELL),0.0)),TEMP,,t21o000,
1032 NSOL, 28, (NODE( DATM, (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1033 NSOL, 29, (NODE( DATM, (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1034 NSOL, 30, (NODE( DATM, (0.0-DCRAD),0.0)),TEMP,,o21o000,
1035 PRVAR, 2, 3, 4, 5, 6, 7,
1036 PRVAR, 8, 9, 10, 11, 12, 13,
1037 PRVAR, 14, 15, 16, 17, 18, 19,
1038 PRVAR, 20, 21, 22, 23, 24, 25,
1039 PRVAR, 26, 27, 28, 29, 30,
1040 /COM,
1041 /COM, *****
1042 /COM, * Temperature Profile from center to lower right (45 deg.) *
1043 /COM, *****
1044 NSOL, 2, (NODE( 0.0, 0.0,0.0)),TEMP,,ts1i045,
1045 NSOL, 3, (NODE( THWLL, (0.0-THWLL),0.0)),TEMP,,t01i045,
1046 NSOL, 4, (NODE( (THWLL+SWALL), (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1047 NSOL, 5, (NODE( (DATM-QCELL), (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1048 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i045,
1049 NSOL, 7, (NODE( (DATM+QCELL), (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1050 NSOL, 8, (NODE( (DATM+HCELL), (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1051 NSOL, 9, (NODE( (DATM+SCELL), (0.0-DATM-SCELL),0.0)),TEMP,,t01o045,
1052 NSOL, 10, (NODE( (DAT1-HCELL), (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1053 NSOL, 11, (NODE( (DAT1-QCELL), (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1054 NSOL, 12, (NODE( DAT1, (0.0-DAT1),0.0)),TEMP,,c11i045,
1055 NSOL, 13, (NODE( (DAT1+QCELL), (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1056 NSOL, 14, (NODE( (DAT1+HCELL), (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1057 NSOL, 15, (NODE( (DAT1+SCELL), (0.0-DAT1-SCELL),0.0)),TEMP,,t11o045,
1058 NSOL, 16, (NODE( (DAT2-HCELL), (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1059 NSOL, 17, (NODE( (DAT2-QCELL), (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1060 NSOL, 18, (NODE( DAT2, (0.0-DAT2),0.0)),TEMP,,c19i045,
1061 NSOL, 19, (NODE( (DAT2+QCELL), (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1062 NSOL, 20, (NODE( (DAT2+HCELL), (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1063 NSOL, 21, (NODE( (DAT2+SCELL), (0.0-DAT2-SCELL),0.0)),TEMP,,t19o045,
1064 NSOL, 22, (NODE( DM45, (-1.0*DM45),0.0)),TEMP,,i19o045,
1065 NSOL, 23, (NODE( DO45, (-1.0*DO45),0.0)),TEMP,,o19o045,
1066 /COM, Add centers of assemblies 13 and 17
1067 NSOL, 24, (NODE( DAT2, (-1.0*DAT1),0.0)),TEMP,,c13i045,
1068 NSOL, 25, (NODE( DAT1, (-1.0*DAT2),0.0)),TEMP,,c17i045,

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1069 PRVAR, 2, 3, 4, 5, 6, 7,
1070 PRVAR, 8, 9, 10, 11, 12, 13,
1071 PRVAR, 14, 15, 16, 17, 18, 19,
1072 PRVAR, 20, 21, 22, 23, 24, 25,
1073 /COM,
1074 /COM, *****
1075 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1076 /COM, *****
1077 NSOL, 2, (NODE(      0.0, (0.0-DATM), 0.0)), TEMP, ,ts2i180,
1078 NSOL, 3, (NODE(      (THWLL), (0.0-DATM), 0.0)), TEMP, ,t02i180,
1079 NSOL, 4, (NODE(      (THWLL+SWALL), (0.0-DATM), 0.0)), TEMP, ,s02i180,
1080 NSOL, 5, (NODE(      (DATM-QCELL), (0.0-DATM), 0.0)), TEMP, ,h02i180,
1081 NSOL, 6, (NODE(      (DATM), (0.0-DATM), 0.0)), TEMP, ,c02i180,
1082 NSOL, 7, (NODE(      (DATM+QCELL), (0.0-DATM), 0.0)), TEMP, ,h02o180,
1083 NSOL, 8, (NODE(      (DATM+HCELL), (0.0-DATM), 0.0)), TEMP, ,s02o180,
1084 NSOL, 9, (NODE(      (DATM+SCELL), (0.0-DATM), 0.0)), TEMP, ,t02o180,
1085 NSOL, 10, (NODE(      (DAT1-HCELL), (0.0-DATM), 0.0)), TEMP, ,s10i180,
1086 NSOL, 11, (NODE(      (DAT1-QCELL), (0.0-DATM), 0.0)), TEMP, ,h10i180,
1087 NSOL, 12, (NODE(      (DAT1), (0.0-DATM), 0.0)), TEMP, ,c10i180,
1088 NSOL, 13, (NODE(      (DAT1+QCELL), (0.0-DATM), 0.0)), TEMP, ,h10o180,
1089 NSOL, 14, (NODE(      (DAT1+HCELL), (0.0-DATM), 0.0)), TEMP, ,s10o180,
1090 NSOL, 15, (NODE(      (DAT1+SCELL), (0.0-DATM), 0.0)), TEMP, ,t10o180,
1091 NSOL, 16, (NODE(      (DAT2-HCELL), (0.0-DATM), 0.0)), TEMP, ,s16i180,
1092 NSOL, 17, (NODE(      (DAT2-QCELL), (0.0-DATM), 0.0)), TEMP, ,h16i180,
1093 NSOL, 18, (NODE(      (DAT2), (0.0-DATM), 0.0)), TEMP, ,c16i180,
1094 NSOL, 19, (NODE(      (DAT2+QCELL), (0.0-DATM), 0.0)), TEMP, ,h16o180,
1095 NSOL, 20, (NODE(      (DAT2+HCELL), (0.0-DATM), 0.0)), TEMP, ,s16o180,
1096 NSOL, 21, (NODE(      (DAT2+SCELL), (0.0-DATM), 0.0)), TEMP, ,t16o180,
1097 NSOL, 22, (NODE(      (DAT3-HCELL), (0.0-DATM), 0.0)), TEMP, ,s22i180,
1098 NSOL, 23, (NODE(      (DAT3-QCELL), (0.0-DATM), 0.0)), TEMP, ,h22i180,
1099 NSOL, 24, (NODE(      (DAT3), (0.0-DATM), 0.0)), TEMP, ,c22i180,
1100 NSOL, 25, (NODE(      (DAT3+QCELL), (0.0-DATM), 0.0)), TEMP, ,h22o180,
1101 NSOL, 26, (NODE(      (DAT3+HCELL), (0.0-DATM), 0.0)), TEMP, ,s22o180,
1102 NSOL, 27, (NODE(      (DAT3+SCELL), (0.0-DATM), 0.0)), TEMP, ,t22o180,
1103 NSOL, 28, (NODE(      (DCRAD-QWALL-IWALL), (0.0-DATM), 0.0)), TEMP, ,i22i180,
1104 NSOL, 29, (NODE(      (DCRAD-QWALL), (0.0-DATM), 0.0)), TEMP, ,i22o180,
1105 NSOL, 30, (NODE(      (DCRAD), (0.0-DATM), 0.0)), TEMP, ,o22o180,
1106 PRVAR, 2, 3, 4, 5, 6, 7,
1107 PRVAR, 8, 9, 10, 11, 12, 13,
1108 PRVAR, 14, 15, 16, 17, 18, 19,
1109 PRVAR, 20, 21, 22, 23, 24, 25,
1110 PRVAR, 26, 27, 28, 29, 30,
1111 /COM, *****
1112 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1113 /COM, *****
1114 NSOL, 2, (NODE(      0.0,      DATM, 0.0)), TEMP, ,ts2i180,
1115 NSOL, 3, (NODE(      (THWLL),      DATM, 0.0)), TEMP, ,t02i180,
1116 NSOL, 4, (NODE(      (THWLL+SWALL),      DATM, 0.0)), TEMP, ,s02i180,
1117 NSOL, 5, (NODE(      (DATM-QCELL),      DATM, 0.0)), TEMP, ,h02i180,
1118 NSOL, 6, (NODE(      (DATM),      DATM, 0.0)), TEMP, ,c02i180,
1119 NSOL, 7, (NODE(      (DATM+QCELL),      DATM, 0.0)), TEMP, ,h02o180,
1120 NSOL, 8, (NODE(      (DATM+HCELL),      DATM, 0.0)), TEMP, ,s02o180,
1121 NSOL, 9, (NODE(      (DATM+SCELL),      DATM, 0.0)), TEMP, ,t02o180,
1122 NSOL, 10, (NODE(      (DAT1-HCELL),      DATM, 0.0)), TEMP, ,s10i180,
1123 NSOL, 11, (NODE(      (DAT1-QCELL),      DATM, 0.0)), TEMP, ,h10i180,
1124 NSOL, 12, (NODE(      (DAT1),      DATM, 0.0)), TEMP, ,c10i180,
1125 NSOL, 13, (NODE(      (DAT1+QCELL),      DATM, 0.0)), TEMP, ,h10o180,
1126 NSOL, 14, (NODE(      (DAT1+HCELL),      DATM, 0.0)), TEMP, ,s10o180,
1127 NSOL, 15, (NODE(      (DAT1+SCELL),      DATM, 0.0)), TEMP, ,t10o180,
1128 NSOL, 16, (NODE(      (DAT2-HCELL),      DATM, 0.0)), TEMP, ,s16i180,
1129 NSOL, 17, (NODE(      (DAT2-QCELL),      DATM, 0.0)), TEMP, ,h16i180,
1130 NSOL, 18, (NODE(      (DAT2),      DATM, 0.0)), TEMP, ,c16i180,
1131 NSOL, 19, (NODE(      (DAT2+QCELL),      DATM, 0.0)), TEMP, ,h16o180,
1132 NSOL, 20, (NODE(      (DAT2+HCELL),      DATM, 0.0)), TEMP, ,s16o180,
1133 NSOL, 21, (NODE(      (DAT2+SCELL),      DATM, 0.0)), TEMP, ,t16o180,
1134 NSOL, 22, (NODE(      (DAT3-HCELL),      DATM, 0.0)), TEMP, ,s22i180,
1135 NSOL, 23, (NODE(      (DAT3-QCELL),      DATM, 0.0)), TEMP, ,h22i180,
1136 NSOL, 24, (NODE(      (DAT3),      DATM, 0.0)), TEMP, ,c22i180,
1137 NSOL, 25, (NODE(      (DAT3+QCELL),      DATM, 0.0)), TEMP, ,h22o180,
1138 NSOL, 26, (NODE(      (DAT3+HCELL),      DATM, 0.0)), TEMP, ,s22o180,

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1139 NSOL,27,(NODE(      (DAT3+SCELL),      DATM,0.0)),TEMP,,t22o180,
1140 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1141 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1142 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1143 PRVAR, 2, 3, 4, 5, 6, 7,
1144 PRVAR, 8, 9,10,11,12,13,
1145 PRVAR,14,15,16,17,18,19,
1146 PRVAR,20,21,22,23,24,25,
1147 PRVAR,26,27,28,29,30,
1148 /COM,
1149 /COM, *****
1150 /COM, * Temperature Profile from center to upper right (135 deg.) *
1151 /COM, *****
1152 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1153 NSOL, 3,(NODE(      THWLL,      (THWLL),0.0)),TEMP,,t02i135,
1154 NSOL, 4,(NODE(      (THWLL+SWALL),      (THWLL+SWALL),0.0)),TEMP,,s02i135,
1155 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1156 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1157 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1158 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1159 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o135,
1160 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,
1161 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1162 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1163 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1164 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1165 NSOL,15,(NODE(      (DAT1+SCELL),      (DAT1+SCELL),0.0)),TEMP,,t12o135,
1166 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1167 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1168 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1169 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1170 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1171 NSOL,21,(NODE(      (DAT2+SCELL),      (DAT2+SCELL),0.0)),TEMP,,t20o135,
1172 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1173 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1174 /COM, Add centers of assemblies 13 and 17
1175 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1176 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1177 PRVAR, 2, 3, 4, 5, 6, 7,
1178 PRVAR, 8, 9,10,11,12,13,
1179 PRVAR,14,15,16,17,18,19,
1180 PRVAR,20,21,22,23,24,25,
1181 /COM,
1182 /COM, *****
1183 /COM, *Temperature Profile from center offset to top of WP (180 deg.)*
1184 /COM, *****
1185 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1186 NSOL, 3,(NODE(      DATM,      (THWLL),0.0)),TEMP,,t02i180,
1187 NSOL, 4,(NODE(      DATM,      (THWLL+SWALL),0.0)),TEMP,,s02i180,
1188 NSOL, 5,(NODE(      DATM,      (DATM-QCELL),0.0)),TEMP,,h02i180,
1189 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1190 NSOL, 7,(NODE(      DATM,      (DATM+QCELL),0.0)),TEMP,,h02o180,
1191 NSOL, 8,(NODE(      DATM,      (DATM+HCELL),0.0)),TEMP,,s02o180,
1192 NSOL, 9,(NODE(      DATM,      (DATM+SCELL),0.0)),TEMP,,t02o180,
1193 NSOL,10,(NODE(      DATM,      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1194 NSOL,11,(NODE(      DATM,      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1195 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1196 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1197 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1198 NSOL,15,(NODE(      DATM,      (DAT1+SCELL),0.0)),TEMP,,t10o180,
1199 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1200 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1201 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1202 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1203 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1204 NSOL,21,(NODE(      DATM,      (DAT2+SCELL),0.0)),TEMP,,t16o180,
1205 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1206 NSOL,23,(NODE(      DATM,      (DAT3-QCELL),0.0)),TEMP,,h22i180,
1207 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1208 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,
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1209 NSOL,26,(NODE(          DATM,          (DAT3+HCELL),0.0)),TEMP,,s22o180,
1210 NSOL,27,(NODE(          DATM,          (DAT3+SCELL),0.0)),TEMP,,t22o180,
1211 NSOL,28,(NODE(          DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1212 NSOL,29,(NODE(          DATM,          (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1213 NSOL,30,(NODE(          DATM,          (DCRAD),0.0)),TEMP,,o22o180,
1214 PRVAR, 2, 3, 4, 5, 6, 7,
1215 PRVAR, 8, 9,10,11,12,13,
1216 PRVAR,14,15,16,17,18,19,
1217 PRVAR,20,21,22,23,24,25,
1218 PRVAR,26,27,28,29,30,
1219 FINISH
1220 /COM, *****
1221 /COM,          End of batch input file
1222 /COM, *****
1223 /EXIT,
1224 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

```

/INPUT FILE= /ansys50a/docu/start.ans LINE=      0
*****
ANSYS STARTUP FILE start.ans
*****

```

```

ABBREVIATION= K1          /pnum,kp ,1,
ABBREVIATION= K0          /pnum,kp ,0,
ABBREVIATION= L1          /pnum,line,1,
ABBREVIATION= L0          /pnum,line,0,
ABBREVIATION= A1          /pnum,area,1,
ABBREVIATION= A0          /pnum,area,0,
ABBREVIATION= V1          /pnum,volu,1,
ABBREVIATION= V0          /pnum,volu,0,
ABBREVIATION= N1          /pnum,node,1,
ABBREVIATION= N0          /pnum,node,0,
ABBREVIATION= E1          /pnum,elem,1,
ABBREVIATION= E0          /pnum,elem,0,
ABBREVIATION= M1          /pnum,mat ,1,
ABBREVIATION= M0          /pnum,mat ,0,
ABBREVIATION= R1          /pnum,real,1,
ABBREVIATION= R0          /pnum,real,0,
ABBREVIATION= T1          /pnum,type,1,
ABBREVIATION= T0          /pnum,type,0,
ABBREVIATION= C1          /number,1,
ABBREVIATION= C0          /number,0,
ABBREVIATION= INP         /input,,inp,
ABBREVIATION= X3D         /show,3d,
ABBREVIATION= X11         /show,x11,

```

ABBREVIATION= VEC /show,,,1,
 ABBREVIATION= RAS /show,,,0,
 ABBREVIATION= ON /menu,on,
 ABBREVIATION= OFF /menu,off,
 ABBREVIATION= NVP /config,nvpag,512,
 ABBREVIATION= QUIT /exit,nosav,
 XYZ TRIAD DISPLAY SET TO OFF

VIEW CONE ANGLE FOR WINDOW 1 25.00

 END start.ans

To start ANSYS menu:

type: x3d for console
 x11 for X-term

type: on

 ANSYS REVISION 5.0A 6/16/1995
 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz

 * File name: ucf44w.inp *
 * 44 BWR UCF with Low T.L. Disposal Container *
 * Helium Fill Gas *
 * *
 * Material Property file: props01.dat *
 * *
 * SNF Conductivity file: pwr15e.parm (Check for Changes) *
 * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
 * *
 * SNF Heat Loads file: bwr1049.dat *
 * SNF Type: 10 years old, 49000 Mwd/MTU *
 * *
 * Surface Temp. file: c21w5a.parm *
 * 25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
 * 5.0 m Diameter Drift with Concrete Invert *
 * Drift spacing = 45.0 m *
 * WP c/c spacing = 32.331 m *
 * *

Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512

Work space must also be increased (-m 64)

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED

LENGTH = METERS(M)
 MASS = KILOGRAMS(KG)
 TIME = SECONDS(SEC)
 TEMPERATURE = CENTIGRADE
 CURRENT = AMPS

Read in average effective conductivities from SNF model

*** NOTE ***

CP= .640 TIME= 09:59:32

Restore ANSYS parameters from file= pwr15e.parm.

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

*** NOTE *** CP= .870 TIME= 09:59:33

Restore ANSYS parameters from file= c21w5a.parm.

/INPUT FILE= c21w5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

Define UCF/waste package parameters

(UCF dimensions converted from inches/cm/mm to meters were requi

MIRAD = inner radius of UCF He Backfill shell (m) (NOT

MWALL = UCF He Backfill shell thickness (m) (NOT

DCRAD = disposal container outer radius (m)

OWALL = outer barrier thickness (m)

IWALL = inner barrier thickness (m)

DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)

GCORS = corner guide short side width (m)

GWALL = basket guide thickness (m)

GLEN1 = side guide 1/3 width (m) (NOT USED)

GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)

SWALL = stainless tube thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length

PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0

MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .7630000

PARAMETER OWALL = .5000000E-01

PARAMETER IWALL = .2000000E-01

PARAMETER DCIRD = .6930000

PARAMETER GCORL = .3200000

PARAMETER GCORS = .1816000

PARAMETER GWALL = .9500000E-02

GLEN1=9.6170*2.54/100.0

GLENT=28.866*2.54/100.0

PARAMETER HCELL = .7650000E-01

PARAMETER SWALL = .3500000E-02

PARAMETER TWALL = .2000000E-01

PARAMETER THWLL = .1000000E-01

PARAMETER ACTVL = 3.810000

PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)

FUEL = volumetric heat production (W/m³) f(yrs)

FVOLUME = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)

QCELL = 1/4 of basket cell opening (m)

SCELL = 1/2 of basket cell opening+SS wall(m)

ACELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c

GY## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)

MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)

DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.

DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVOLUME = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCELL = .8000000E-01
ACELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)

MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5395225

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
 TM_START = start time (sec)
 TMI* = time increment for solution (sec)
 TME* = start and stop for time do-loops (sec)
 TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760
 PARAMETER TMI0 = 3155760.
 PARAMETER TMI1 = .3155760E+08
 PARAMETER TMI10 = .3155760E+09
 PARAMETER TMI100 = .3155760E+10
 PARAMETER TMI1000 = .3155760E+11
 PARAMETER TME0 = .2840187E+08
 PARAMETER TME1 = .3155763E+08
 PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:34 JUN 19, 1995 CP= 1.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP

THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **

** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density:	DENS	(kg/m^3)	**
** Emissivity	EMIS		**
** Conductivity:	KXX	(W/m/K)	**
** Specific Heat:	C	(J/kg/K)	**

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE .NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 .NUM. POINTS= 1

SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1
SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1
SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1
SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1
SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1
SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***

SLOC= 1	21.11000	37.78000	65.56000
	93.33000	121.1100	148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***

SLOC= 7	176.6700	204.4400	232.2200
	260.0000	287.7800	315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***

SLOC= 13	343.3300	371.1100	398.8900
	426.6700	454.4400	482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***

SLOC= 19	510.0000	537.7800	565.5600
	593.3300	621.1100	648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***

SLOC= 25	676.6700	704.4400	732.2200
	760.0000	787.7800	815.5600

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6

SLOC= 1	13.33000	13.67000	14.19000	14.54000
	15.06000	15.58000		

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12

SLOC= 7	15.92000	16.44000	16.96000	17.31000
	17.83000	18.17000		

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18

SLOC= 13	18.52000	19.04000	19.38000	19.90000
	20.25000	20.77000		

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24

SLOC= 19	21.11000	21.46000	21.98000	22.33000
	22.67000	23.02000		

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30

SLOC= 25	23.54000	23.88000	24.23000	24.58000
	24.92000	25.27000		

PROPERTY TABLE C MAT= 1 NUM. POINTS= 6

SLOC= 1	481.6800	486.9200	498.0900	499.3800
	509.9800	520.2900		

PROPERTY TABLE C MAT= 1 NUM. POINTS= 12

SLOC= 7	521.0700	527.3800	536.9200	537.3400
	543.0200	543.3100		

PROPERTY TABLE C MAT= 1 NUM. POINTS= 18

SLOC= 13	546.9100	552.1400	552.2600	557.2200
	557.2500	565.1100		

PROPERTY TABLE C MAT= 1 NUM. POINTS= 24

SLOC= 19	565.0100	564.9100	572.3500	572.1400
	574.9200	574.6800		

PROPERTY TABLE C MAT= 1 NUM. POINTS= 30

SLOC= 25	581.6400	581.3000	583.8600	586.3600
	585.9600	588.3900		

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6

SLOC= 1	40.84000	41.36000	41.88000	42.23000
	42.23000	42.23000		

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12

SLOC= 7 42.06000 41.88000 41.36000 41.02000
40.50000 39.98000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 18
SLOC= 13 39.29000 38.77000 38.08000 37.56000
36.69000 36.17000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 24
SLOC= 19 35.48000 34.61000 33.92000 33.23000
32.36000 31.50000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 30
SLOC= 25 30.29000 28.90000 27.35000 26.48000
26.13000 26.13000

PROPERTY TABLE C MAT= 3 NUM. POINTS= 6
SLOC= 1 428.7200 444.9500 460.9400 476.8700
486.0800 495.6600

PROPERTY TABLE C MAT= 3 NUM. POINTS= 12
SLOC= 7 506.0900 517.0700 525.6400 536.9900
543.6300 550.6200

PROPERTY TABLE C MAT= 3 NUM. POINTS= 18
SLOC= 13 562.2100 577.3200 589.1000 600.5700
611.3500 629.0900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 24
SLOC= 19 645.3200 665.1200 682.0700 694.5200
724.0700 761.9500

PROPERTY TABLE C MAT= 3 NUM. POINTS= 30
SLOC= 25 806.3100 888.6000 1095.040 1638.780
808.6800 736.9000

Define K for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 93.33000 121.1100 148.8900
176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 260.0000 287.7800 315.5600
343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 426.6700 454.4400 482.2200
510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 593.3300 621.1100 648.8900
676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 27 ***
SLOC= 25 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 6
SLOC= 1 12.29000 12.63000 13.15000 13.67000
14.02000 14.54000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 12
SLOC= 7 14.88000 15.40000 15.75000 16.10000
16.61000 16.96000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 18
SLOC= 13 17.31000 17.65000 18.00000 18.52000
18.86000 19.21000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
 SLOC= 1 460.6900 477.4200 501.0200 504.6500
 498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
 SLOC= 7 536.8800 559.8500 576.8300 576.2100
 581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
 SLOC= 13 619.5800 636.7600 654.2000 678.2500
 696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 .0000000E+00 10.00000 20.00000
 30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 60.00000 70.00000 80.00000
 90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 120.0000 130.0000 140.0000
 150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 180.0000 190.0000 200.0000
 210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 240.0000 250.0000 260.0000
 270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
 SLOC= 31 300.0000 310.0000 320.0000
 330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
 SLOC= 37 360.0000 370.0000 380.0000
 390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
 SLOC= 43 420.0000 430.0000 440.0000

450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
SLOC= 1 8.720000 8.540000 8.360000 8.190000
8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
SLOC= 7 7.720000 7.580000 7.440000 7.310000
7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
SLOC= 13 6.930000 6.820000 6.700000 6.600000
6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
SLOC= 19 6.290000 6.190000 6.100000 6.010000
5.920000 5.840000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 30
SLOC= 25 5.760000 5.680000 5.600000 5.520000
5.450000 5.380000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 36
SLOC= 31 5.310000 5.240000 5.180000 5.110000
5.050000 4.990000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 42
SLOC= 37 4.930000 4.870000 4.810000 4.760000
4.700000 4.650000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 48
SLOC= 43 4.600000 4.550000 4.500000 4.450000
4.400000 4.350000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 50
SLOC= 48 4.310000 4.270000 4.220000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 6
SLOC= 1 12.29000 12.44000 12.58000 12.72000
12.87000 13.01000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 12
SLOC= 7 13.15000 13.28000 13.42000 13.55000
13.69000 13.82000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 18
SLOC= 13 13.95000 14.08000 14.21000 14.34000
14.46000 14.59000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 24
SLOC= 19 14.72000 14.84000 14.96000 15.09000
15.21000 15.33000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 30
SLOC= 25 15.45000 15.57000 15.69000 15.81000
15.93000 16.05000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 36
SLOC= 31 16.17000 16.29000 16.40000 16.52000
16.64000 16.76000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 42
SLOC= 37 16.88000 16.99000 17.11000 17.23000
17.35000 17.46000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 48

SLOC= 43 17.58000 17.70000 17.82000 17.94000
18.06000 18.18000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 50
SLOC= 48 18.30000 18.42000 18.54000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 6
SLOC= 1 1.940000 1.940000 1.940000 1.940000
1.940000 1.940000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 12
SLOC= 7 1.940000 1.950000 1.950000 1.950000
1.950000 1.950000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 18
SLOC= 13 1.950000 1.950000 1.960000 1.960000
1.960000 1.960000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 24
SLOC= 19 1.960000 1.970000 1.970000 1.970000
1.970000 1.980000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
SLOC= 25 1.980000 1.980000 1.980000 1.990000
1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
SLOC= 31 2.000000 2.000000 2.000000 2.010000
2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
SLOC= 37 2.020000 2.020000 2.020000 2.030000
2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
SLOC= 43 2.040000 2.040000 2.040000 2.050000
2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -13.15000 6.850000 26.85000
76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 226.8500 276.8500 326.8500
376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
SLOC= 1 .1875000 .1750000 .1625000 .1422000
.1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
.6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 6
SLOC= 1 .1370000 .1450000 .1520000 .1700000

	.1870000	.2040000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 12		
SLOC= 7	.2200000	.2360000	.2520000	.2640000
	.2780000	.2910000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 15		
SLOC= 13	.3040000	.3300000	.3540000	
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 6		
SLOC= 1	1.348000	1.254700	1.161400	.9950000
	.8711000	.7740000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 12		
SLOC= 7	.6964000	.6329000	.5804000	.5356000
	.4975000	.4643000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 15		
SLOC= 13	.4354000	.3868000	.3482000	
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2500000E-01	.2600000E-01	.3000000E-01
	.3400000E-01	.3700000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 12		
SLOC= 7	.4100000E-01	.4400000E-01	.4700000E-01	.5000000E-01
	.5200000E-01	.5500000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 15		
SLOC= 13	.5700000E-01	.6200000E-01	.6700000E-01	
PROPERTY TABLE C MAT=	8	NUM. POINTS= 6		
SLOC= 1	1006.200	1006.600	1007.000	1009.000
	1014.000	1021.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 12		
SLOC= 7	1030.000	1040.000	1051.000	1063.000
	1075.000	1087.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 15		
SLOC= 13	1099.000	1121.000	1141.000	
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 6		
SLOC= 1	1.303700	1.213500	1.123300	.9625000
	.8425000	.7485000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 12		
SLOC= 7	.6739000	.6124000	.5615000	.5214000
	.4812000	.4512000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 15		
SLOC= 13	.4211000	.3743000	.3368000	
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2400000E-01	.2600000E-01	.2900000E-01
	.3300000E-01	.3600000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 12		
SLOC= 7	.3900000E-01	.4200000E-01	.4500000E-01	.4700000E-01
	.5000000E-01	.5200000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 15		
SLOC= 13	.5500000E-01	.6000000E-01	.6500000E-01	
PROPERTY TABLE C MAT=	9	NUM. POINTS= 6		
SLOC= 1	1041.800	1041.400	1041.000	1042.000
	1045.000	1050.000		
PROPERTY TABLE C MAT=	9	NUM. POINTS= 12		
SLOC= 7	1056.000	1065.000	1075.000	1086.500

1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
.2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
.3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

Define K and C for material 12

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500
326.8500 526.8500 726.8500

PROPERTY TABLE KXX MAT= 12 NUM. POINTS= 6
SLOC= 1 413.0000 401.0000 393.0000 379.0000
366.0000 352.0000

PROPERTY TABLE C MAT= 12 NUM. POINTS= 6
SLOC= 1 356.0000 385.0000 397.0000 417.0000
433.0000 451.0000

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***
SLOC= 1 23.00000 50.00000 100.0000
150.0000 200.0000

PROPERTY TABLE KXX MAT= 13 NUM. POINTS= 5
SLOC= 1 182.5600 190.1700 199.2200 202.9100
203.7200

PROPERTY TABLE C MAT= 13 NUM. POINTS= 5
SLOC= 1 868.0000 903.0000 946.0000 976.0000
998.0000

** End of Material Property List **

Read in single assembly heat loads
Calculate the volumetric heat generation
(Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

** History of SNF Assembly Heat Generation Rates **
** Output of PHIA, SCSI: B00000000-01717-1200-3000X Rev.00B **
**
** Executable File Name: PHIA00B.EXE **
** Output File Name: bwr1049.dat **
** Execution Date: 03/07/95 **
** Start Age (years): 10.0 **
** Decay Period (years): 10000 **
** Enrichment (percent): 3.74 **
** Burnup (MWd/MTU): 49000 **
** Assembly Type: BUR **
** SNF U Mass (MTU/assy): 0.200 **
**

** ASSY(#,1) is the SNF assembly heat in Watts. **
 ** ASSY(#,0) is the time post emplacement in years. **

PARAMETER ASSY(1,1) =	409.4200 408.7300	409.2500 408.5500	409.0700	408.9000
PARAMETER ASSY(7,1) =	408.3800 407.6800	408.2000 406.8200	408.0300	407.8600
PARAMETER ASSY(13,1) =	405.9700 402.6100	405.1200 401.7900	404.2800	403.4400
PARAMETER ASSY(19,1) =	400.9700 397.7400	400.1500 396.9500	399.3400	398.5400
PARAMETER ASSY(25,1) =	396.1600 393.0600	395.3800 386.0700	394.6000	393.8300
PARAMETER ASSY(31,1) =	379.4900 357.2900	373.4300 352.6900	367.7000	362.3600
PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000

PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000 700.0000	550.0000 750.0000	600.0000	650.0000
PARAMETER ASSY(79,0) =	800.0000 1000.000	850.0000 1500.000	900.0000	950.0000
PARAMETER ASSY(85,0) =	2000.000 4000.000	2500.000 4500.000	3000.000	3500.000
PARAMETER ASSY(91,0) =	5000.000 7000.000	5500.000 7500.000	6000.000	6500.000
PARAMETER ASSY(97,0) =	8000.000 10000.00	8500.000	9000.000	9500.000

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)
 INPUT MATRIX= ASSY(1,0)
 INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS
 RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697
 FACTOR ON FIRST VECTOR PARAMETER = 1.0000
 FACTOR ON SECOND VECTOR PARAMETER= 1.0000
 FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN
 FUEL(1) = COPY ASSY(1)
 SCALE FACTORS RESULT= 15.697 INPUT= 1.0000
 VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity
 Density: DENS (kg/m^3)
 Conductivity: KXX (W/m/K)
 Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE ***
 SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
SLOC= 1 274.0000
Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Define new material 15 for low thermal loading
outer barrier of 70/30 Copper Nickel (C71500)
Density: DENS (kg/m³)
Conductivity: KXX (W/m/K)
Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00
Density (lb/in³ converted to kg/m³)

PROPERTY TABLE DENS MAT= 15 NUM. POINTS= 1
SLOC= 1 8940.640
Specific Heat (Btu/lb/F converted to J/kg/K)

PROPERTY TABLE C MAT= 15 NUM. POINTS= 1
SLOC= 1 376.7898
Conductivity (Btu/hr/ft/F converted to W/m/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 1 20.00000 100.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 4 ***
SLOC= 3 200.0000 300.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 5 400.0000 500.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 8 ***
SLOC= 7 600.0000 700.0000

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 2
SLOC= 1 29.42190 29.24883

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 4
SLOC= 3 34.09479 38.59461

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 6
SLOC= 5 43.09443 48.11346

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 8
SLOC= 7 53.13249 58.15152

Construct geometry for Disposal Container

Define center and axis keypoints for waste package
Also, create placeholder keypoints and lines
(K's 1,2,3,4,5,6,7,8)
(L's 1,2,3,4)

KEYPOINT	1	X,Y,Z=	.000000E+00	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	2	X,Y,Z=	.000000E+00	.000000E+00	1.00000	IN CSYS= 0
KEYPOINT	3	X,Y,Z=	.000000E+00	.000000E+00	1.30000	IN CSYS= 0
KEYPOINT	4	X,Y,Z=	.000000E+00	.000000E+00	1.40000	IN CSYS= 0
KEYPOINT	5	X,Y,Z=	.000000E+00	.000000E+00	1.50000	IN CSYS= 0
KEYPOINT	6	X,Y,Z=	.000000E+00	.000000E+00	1.60000	IN CSYS= 0
KEYPOINT	7	X,Y,Z=	.000000E+00	.000000E+00	1.70000	IN CSYS= 0
KEYPOINT	8	X,Y,Z=	.000000E+00	.000000E+00	1.80000	IN CSYS= 0

LINE CONNECTS KEYPOINTS 3 4
LINE NO.= 1 KP1= 3 TAN1= .0000 .0000 -1.0000
KP2= 4 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 4 5
LINE NO.= 2 KP1= 4 TAN1= .0000 .0000 -1.0000
KP2= 5 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 5 6
LINE NO.= 3 KP1= 5 TAN1= .0000 .0000 -1.0000
KP2= 6 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 6 7
LINE NO.= 4 KP1= 6 TAN1= .0000 .0000 -1.0000
KP2= 7 TAN2= .0000 .0000 1.0000

Define disposal container outer radius and material interface
(K's 9,10,11,12,13,14)
(L's 5,6,7,8,9,10,11)
(A's 1,2)

KEYPOINT	9	X,Y,Z=	.000000E+00	-.763000	.000000E+00	IN CSYS= 0
KEYPOINT	10	X,Y,Z=	.763000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	11	X,Y,Z=	.000000E+00	.763000	.000000E+00	IN CSYS= 0

KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0
 KEYPOINT 20 X,Y,Z= .490025 .490025 .000000E+00 IN CSYS= 0

KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS= 0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS= 0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS= 0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS= 0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS= 0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS= 0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS= 0

LINE CONNECTS KEYPOINTS 14 15
 LINE NO.= 12 KP1= 14 TAN1= .0000 1.0000 .0000
 KP2= 15 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 16 AND 15 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 13 KP1= 16 TAN1= .9999 -.0144 .0000
 KP2= 15 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 17 AND 16 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 14 KP1= 17 TAN1= .9694 -.2453 .0000
 KP2= 16 TAN2= -.9999 .0144 .0000

ARC BETWEEN KEYPOINTS 18 AND 17 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 15 KP1= 18 TAN1= .9659 -.2590 .0000
 KP2= 17 TAN2= -.9694 .2453 .0000

ARC BETWEEN KEYPOINTS 19 AND 18 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 16 KP1= 19 TAN1= .7208 -.6932 .0000
 KP2= 18 TAN2= -.9659 .2590 .0000

ARC BETWEEN KEYPOINTS 20 AND 19 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 17 KP1= 20 TAN1= .7071 -.7071 .0000
 KP2= 19 TAN2= -.7208 .6932 .0000

ARC BETWEEN KEYPOINTS 21 AND 20 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 18 KP1= 21 TAN1= .6932 -.7208 .0000
 KP2= 20 TAN2= -.7071 .7071 .0000

ARC BETWEEN KEYPOINTS 22 AND 21 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 19 KP1= 22 TAN1= .2590 -.9659 .0000
 KP2= 21 TAN2= -.6932 .7208 .0000

ARC BETWEEN KEYPOINTS 23 AND 22 ORIENTATION KEYPOINT= 1

RADIUS= .69300						
LINE NO.=	20	KP1=	23	TAN1=	.2453	-.9694 .0000
		KP2=	22	TAN2=	-.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 24 AND 23 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	21	KP1=	24	TAN1=	.0144	-.9999 .0000
		KP2=	23	TAN2=	-.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 25 AND 24 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	22	KP1=	25	TAN1=	.0000	-1.0000 .0000
		KP2=	24	TAN2=	-.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 26 AND 25 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	23	KP1=	26	TAN1=	-.0144	-.9999 .0000
		KP2=	25	TAN2=	.0000	1.0000 .0000
ARC BETWEEN KEYPOINTS 27 AND 26 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	24	KP1=	27	TAN1=	-.2453	-.9694 .0000
		KP2=	26	TAN2=	.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 28 AND 27 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	25	KP1=	28	TAN1=	-.2590	-.9659 .0000
		KP2=	27	TAN2=	.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 29 AND 28 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	26	KP1=	29	TAN1=	-.6932	-.7208 .0000
		KP2=	28	TAN2=	.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 30 AND 29 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	27	KP1=	30	TAN1=	-.7071	-.7071 .0000
		KP2=	29	TAN2=	.6932	.7208 .0000
ARC BETWEEN KEYPOINTS 31 AND 30 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	28	KP1=	31	TAN1=	-.7208	-.6932 .0000
		KP2=	30	TAN2=	.7071	.7071 .0000
ARC BETWEEN KEYPOINTS 32 AND 31 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	29	KP1=	32	TAN1=	-.9659	-.2590 .0000
		KP2=	31	TAN2=	.7208	.6932 .0000
ARC BETWEEN KEYPOINTS 33 AND 32 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	30	KP1=	33	TAN1=	-.9694	-.2453 .0000
		KP2=	32	TAN2=	.9659	.2590 .0000
ARC BETWEEN KEYPOINTS 34 AND 33 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	31	KP1=	34	TAN1=	-.9999	-.0144 .0000
		KP2=	33	TAN2=	.9694	.2453 .0000
ARC BETWEEN KEYPOINTS 35 AND 34 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	32	KP1=	35	TAN1=	-1.0000	.0000 .0000
		KP2=	34	TAN2=	.9999	.0144 .0000
LINE CONNECTS KEYPOINTS 12 35						
LINE NO.=	33	KP1=	12	TAN1=	.0000	-1.0000 .0000
		KP2=	35	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS 25 13						
LINE NO.=	34	KP1=	25	TAN1=	-1.0000	.0000 .0000

KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
(51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
(L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
(50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
(67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
(84,85,86,87,88,89,90,91,92)
(A's 5 - 26)

horizontal thermal shunt

KEYPOINT 36 X,Y,Z= .000000E+00 -.100000E-01 .000000E+00 IN CSYS= 0
KEYPOINT 37 X,Y,Z= .000000E+00 .100000E-01 .000000E+00 IN CSYS= 0
KEYPOINT 38 X,Y,Z= .100000E-01 -.100000E-01 .000000E+00 IN CSYS= 0
KEYPOINT 39 X,Y,Z= .100000E-01 .000000E+00 .000000E+00 IN CSYS= 0
KEYPOINT 40 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS=	0

vertical thermal shunt

KEYPOINT	53	X,Y,Z=	000000E+00	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS=	0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS=	0

Lines; shunt widths, horizontal then vertical: (35-57)

LINE CONNECTS KEYPOINTS	36	1			
LINE NO.=	35	KP1=	36	TAN1=	.0000 -1.0000 .0000
		KP2=	1	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	1	37			
LINE NO.=	36	KP1=	1	TAN1=	.0000 -1.0000 .0000
		KP2=	37	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	38	39			
LINE NO.=	37	KP1=	38	TAN1=	.0000 -1.0000 .0000
		KP2=	39	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS		39	40			
LINE NO.=	38	KP1=	39	TAN1=	.0000	-1.0000 .0000
		KP2=	40	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		41	42			
LINE NO.=	39	KP1=	41	TAN1=	.0000	-1.0000 .0000
		KP2=	42	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		42	43			
LINE NO.=	40	KP1=	42	TAN1=	.0000	-1.0000 .0000
		KP2=	43	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		44	45			
LINE NO.=	41	KP1=	44	TAN1=	.0000	-1.0000 .0000
		KP2=	45	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		45	46			
LINE NO.=	42	KP1=	45	TAN1=	.0000	-1.0000 .0000
		KP2=	46	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		47	48			
LINE NO.=	43	KP1=	47	TAN1=	.0000	-1.0000 .0000
		KP2=	48	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		48	49			
LINE NO.=	44	KP1=	48	TAN1=	.0000	-1.0000 .0000
		KP2=	49	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		50	51			
LINE NO.=	45	KP1=	50	TAN1=	.0000	-1.0000 .0000
		KP2=	51	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		51	52			
LINE NO.=	46	KP1=	51	TAN1=	.0000	-1.0000 .0000
		KP2=	52	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		53	54			
LINE NO.=	47	KP1=	53	TAN1=	-1.0000	.0000 .0000
		KP2=	54	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		55	56			
LINE NO.=	48	KP1=	55	TAN1=	-1.0000	.0000 .0000
		KP2=	56	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		57	58			
LINE NO.=	49	KP1=	57	TAN1=	-1.0000	.0000 .0000
		KP2=	58	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		59	60			
LINE NO.=	50	KP1=	59	TAN1=	-1.0000	.0000 .0000
		KP2=	60	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		37	40			
LINE NO.=	51	KP1=	37	TAN1=	-1.0000	.0000 .0000
		KP2=	40	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		1	39			
LINE NO.=	52	KP1=	1	TAN1=	-1.0000	.0000 .0000
		KP2=	39	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		36	38			
LINE NO.=	53	KP1=	36	TAN1=	-1.0000	.0000 .0000
		KP2=	38	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		61	62			
LINE NO.=	54	KP1=	61	TAN1=	-1.0000	.0000 .0000
		KP2=	62	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		63	64			
LINE NO.=	55	KP1=	63	TAN1=	-1.0000	.0000 .0000

	KP2=	64	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 65 66						
LINE NO.=	56	KP1=	65	TAN1=	-1.0000	.0000
		KP2=	66	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 67 68						
LINE NO.=	57	KP1=	67	TAN1=	-1.0000	.0000
		KP2=	68	TAN2=	1.0000	.0000
Lines; shunt edges, horizontal then vertical: (58-92)						
LINE CONNECTS KEYPOINTS 38 41						
LINE NO.=	58	KP1=	38	TAN1=	-1.0000	.0000
		KP2=	41	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 39 42						
LINE NO.=	59	KP1=	39	TAN1=	-1.0000	.0000
		KP2=	42	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 40 43						
LINE NO.=	60	KP1=	40	TAN1=	-1.0000	.0000
		KP2=	43	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 41 44						
LINE NO.=	61	KP1=	41	TAN1=	-1.0000	.0000
		KP2=	44	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 42 45						
LINE NO.=	62	KP1=	42	TAN1=	-1.0000	.0000
		KP2=	45	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 43 46						
LINE NO.=	63	KP1=	43	TAN1=	-1.0000	.0000
		KP2=	46	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 44 47						
LINE NO.=	64	KP1=	44	TAN1=	-1.0000	.0000
		KP2=	47	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 45 48						
LINE NO.=	65	KP1=	45	TAN1=	-1.0000	.0000
		KP2=	48	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 46 49						
LINE NO.=	66	KP1=	46	TAN1=	-1.0000	.0000
		KP2=	49	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 47 50						
LINE NO.=	67	KP1=	47	TAN1=	-1.0000	.0000
		KP2=	50	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 48 51						
LINE NO.=	68	KP1=	48	TAN1=	-1.0000	.0000
		KP2=	51	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 49 52						
LINE NO.=	69	KP1=	49	TAN1=	-1.0000	.0000
		KP2=	52	TAN2=	1.0000	.0000
LINE CONNECTS KEYPOINTS 26 50						
LINE NO.=	70	KP1=	26	TAN1=	1.0000	.0000
		KP2=	50	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 25 51						
LINE NO.=	71	KP1=	25	TAN1=	1.0000	.0000
		KP2=	51	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 52 24						
LINE NO.=	72	KP1=	52	TAN1=	-1.0000	.0000
		KP2=	24	TAN2=	1.0000	.0000

LINE CONNECTS KEYPOINTS		15	53			
LINE NO.=	73	KP1=	15	TAN1=	.0000	1.0000
		KP2=	53	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		16	54			
LINE NO.=	74	KP1=	16	TAN1=	.0000	1.0000
		KP2=	54	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		53	55			
LINE NO.=	75	KP1=	53	TAN1=	.0000	1.0000
		KP2=	55	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		54	56			
LINE NO.=	76	KP1=	54	TAN1=	.0000	1.0000
		KP2=	56	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		55	57			
LINE NO.=	77	KP1=	55	TAN1=	.0000	1.0000
		KP2=	57	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		56	58			
LINE NO.=	78	KP1=	56	TAN1=	.0000	1.0000
		KP2=	58	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		57	59			
LINE NO.=	79	KP1=	57	TAN1=	.0000	1.0000
		KP2=	59	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		58	60			
LINE NO.=	80	KP1=	58	TAN1=	.0000	1.0000
		KP2=	60	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		59	37			
LINE NO.=	81	KP1=	59	TAN1=	.0000	1.0000
		KP2=	37	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		60	40			
LINE NO.=	82	KP1=	60	TAN1=	.0000	1.0000
		KP2=	40	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		36	61			
LINE NO.=	83	KP1=	36	TAN1=	.0000	1.0000
		KP2=	61	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		38	62			
LINE NO.=	84	KP1=	38	TAN1=	.0000	1.0000
		KP2=	62	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		61	63			
LINE NO.=	85	KP1=	61	TAN1=	.0000	1.0000
		KP2=	63	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		62	64			
LINE NO.=	86	KP1=	62	TAN1=	.0000	1.0000
		KP2=	64	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		63	65			
LINE NO.=	87	KP1=	63	TAN1=	.0000	1.0000
		KP2=	65	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		64	66			
LINE NO.=	88	KP1=	64	TAN1=	.0000	1.0000
		KP2=	66	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		65	67			
LINE NO.=	89	KP1=	65	TAN1=	.0000	1.0000
		KP2=	67	TAN2=	.0000	-1.0000
					.0000	.0000
LINE CONNECTS KEYPOINTS		66	68			

LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
 KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
 LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
 KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
 LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
 KP2= 34 TAN2= .0000 -1.0000 .0000
 define areas for thermal shunts

DEFINE AREA BY LIST OF LINES
 LINE LIST = 35 53 37 52
 (TRAVERSED IN SAME DIRECTION AS LINE 35)
 AREA NUMBER = 5

DEFINE AREA BY LIST OF LINES
 LINE LIST = 36 52 38 51
 (TRAVERSED IN SAME DIRECTION AS LINE 36)
 AREA NUMBER = 6

DEFINE AREA BY LIST OF LINES
 LINE LIST = 37 58 39 59
 (TRAVERSED IN SAME DIRECTION AS LINE 37)
 AREA NUMBER = 7

DEFINE AREA BY LIST OF LINES
 LINE LIST = 38 59 40 60
 (TRAVERSED IN SAME DIRECTION AS LINE 38)
 AREA NUMBER = 8

DEFINE AREA BY LIST OF LINES
 LINE LIST = 39 61 41 62
 (TRAVERSED IN SAME DIRECTION AS LINE 39)
 AREA NUMBER = 9

DEFINE AREA BY LIST OF LINES
 LINE LIST = 40 62 42 63
 (TRAVERSED IN SAME DIRECTION AS LINE 40)
 AREA NUMBER = 10

DEFINE AREA BY LIST OF LINES
 LINE LIST = 41 64 43 65
 (TRAVERSED IN SAME DIRECTION AS LINE 41)
 AREA NUMBER = 11

DEFINE AREA BY LIST OF LINES
 LINE LIST = 42 65 44 66
 (TRAVERSED IN SAME DIRECTION AS LINE 42)
 AREA NUMBER = 12

DEFINE AREA BY LIST OF LINES
 LINE LIST = 43 67 45 68
 (TRAVERSED IN SAME DIRECTION AS LINE 43)
 AREA NUMBER = 13

DEFINE AREA BY LIST OF LINES
 LINE LIST = 44 68 46 69
 (TRAVERSED IN SAME DIRECTION AS LINE 44)

AREA NUMBER = 14
DEFINE AREA BY LIST OF LINES
LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)
AREA NUMBER = 15
DEFINE AREA BY LIST OF LINES
LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)
AREA NUMBER = 16
DEFINE AREA BY LIST OF LINES
LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)
AREA NUMBER = 17
DEFINE AREA BY LIST OF LINES
LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)
AREA NUMBER = 18
DEFINE AREA BY LIST OF LINES
LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)
AREA NUMBER = 19
DEFINE AREA BY LIST OF LINES
LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)
AREA NUMBER = 20
DEFINE AREA BY LIST OF LINES
LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)
AREA NUMBER = 21
DEFINE AREA BY LIST OF LINES
LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)
AREA NUMBER = 22
DEFINE AREA BY LIST OF LINES
LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)
AREA NUMBER = 23
DEFINE AREA BY LIST OF LINES
LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)
AREA NUMBER = 24
DEFINE AREA BY LIST OF LINES
LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)
AREA NUMBER = 25
DEFINE AREA BY LIST OF LINES
LINE LIST = 91 32 92 57

(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
bottom guide						
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS 69 17
 LINE NO.= 93 KP1= 69 TAN1= .0000 -1.0000 .0000
 KP2= 17 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 18 70
 LINE NO.= 94 KP1= 18 TAN1= .0000 -1.0000 .0000
 KP2= 70 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS		71	69			
LINE NO.= 95	KP1=	71	TAN1=	.0000	-1.0000	.0000
	KP2=	69	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		70	72			
LINE NO.= 96	KP1=	70	TAN1=	.0000	1.0000	.0000
	KP2=	72	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS		73	71			
LINE NO.= 97	KP1=	73	TAN1=	1.0000	.0000	.0000
	KP2=	71	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		72	74			
LINE NO.= 98	KP1=	72	TAN1=	-1.0000	.0000	.0000
	KP2=	74	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		20	73			
LINE NO.= 99	KP1=	20	TAN1=	1.0000	.0002	.0000
	KP2=	73	TAN2=	-1.0000	-.0002	.0000

LINE CONNECTS KEYPOINTS		74	19			
LINE NO.= 100	KP1=	74	TAN1=	-1.0000	.0000	.0000
	KP2=	19	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		75	20			
LINE NO.= 101	KP1=	75	TAN1=	-.0002	-1.0000	.0000
	KP2=	20	TAN2=	.0002	1.0000	.0000

LINE CONNECTS KEYPOINTS		21	76			
LINE NO.= 102	KP1=	21	TAN1=	.0000	1.0000	.0000
	KP2=	76	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS		77	75			
LINE NO.= 103	KP1=	77	TAN1=	.0000	-1.0000	.0000
	KP2=	75	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		76	78			
LINE NO.= 104	KP1=	76	TAN1=	.0000	1.0000	.0000
	KP2=	78	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS		79	77			
LINE NO.= 105	KP1=	79	TAN1=	1.0000	.0000	.0000
	KP2=	77	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		78	80			
LINE NO.= 106	KP1=	78	TAN1=	-1.0000	.0000	.0000
	KP2=	80	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		23	79			
LINE NO.= 107	KP1=	23	TAN1=	1.0000	.0000	.0000
	KP2=	79	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		80	22			
LINE NO.= 108	KP1=	80	TAN1=	-1.0000	.0000	.0000
	KP2=	22	TAN2=	1.0000	.0000	.0000

bottom guide

LINE CONNECTS KEYPOINTS		81	27			
LINE NO.= 109	KP1=	81	TAN1=	-1.0000	.0000	.0000
	KP2=	27	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		28	82			
LINE NO.= 110	KP1=	28	TAN1=	1.0000	.0000	.0000
	KP2=	82	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		83	81			
LINE NO.= 111	KP1=	83	TAN1=	-1.0000	.0000	.0000
	KP2=	81	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS		82	84			
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LINE NO.= 112	KP1= 82	TAN1= 1.0000	.0000	.0000
	KP2= 84	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 85 83				
LINE NO.= 113	KP1= 85	TAN1= .0000	-1.0000	.0000
	KP2= 83	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 84 86				
LINE NO.= 114	KP1= 84	TAN1= .0000	1.0000	.0000
	KP2= 86	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 30 85				
LINE NO.= 115	KP1= 30	TAN1= .0002	-1.0000	.0000
	KP2= 85	TAN2= -.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS 86 29				
LINE NO.= 116	KP1= 86	TAN1= .0000	1.0000	.0000
	KP2= 29	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 87 30				
LINE NO.= 117	KP1= 87	TAN1= -1.0000	.0002	.0000
	KP2= 30	TAN2= 1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS 31 88				
LINE NO.= 118	KP1= 31	TAN1= 1.0000	.0000	.0000
	KP2= 88	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 89 87				
LINE NO.= 119	KP1= 89	TAN1= -1.0000	.0000	.0000
	KP2= 87	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 88 90				
LINE NO.= 120	KP1= 88	TAN1= 1.0000	.0000	.0000
	KP2= 90	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 91 89				
LINE NO.= 121	KP1= 91	TAN1= .0000	-1.0000	.0000
	KP2= 89	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 90 92				
LINE NO.= 122	KP1= 90	TAN1= .0000	1.0000	.0000
	KP2= 92	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 33 91				
LINE NO.= 123	KP1= 33	TAN1= .0000	-1.0000	.0000
	KP2= 91	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 92 32				
LINE NO.= 124	KP1= 92	TAN1= .0000	1.0000	.0000
	KP2= 32	TAN2= .0000	-1.0000	.0000
Guide thickness lines				
LINE CONNECTS KEYPOINTS 69 70				
LINE NO.= 125	KP1= 69	TAN1= -1.0000	.0000	.0000
	KP2= 70	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 71 72				
LINE NO.= 126	KP1= 71	TAN1= -.7071	-.7071	.0000
	KP2= 72	TAN2= .7071	.7071	.0000
LINE CONNECTS KEYPOINTS 73 74				
LINE NO.= 127	KP1= 73	TAN1= .0000	-1.0000	.0000
	KP2= 74	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 75 76				
LINE NO.= 128	KP1= 75	TAN1= -1.0000	.0000	.0000
	KP2= 76	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 77 78				
LINE NO.= 129	KP1= 77	TAN1= -.7071	-.7071	.0000


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      KP2= 78 TAN2= .7071 .7071 .0000
LINE CONNECTS KEYPOINTS 79 80
LINE NO.= 130 KP1= 79 TAN1= .0000 -1.0000 .0000
      KP2= 80 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 82 81
LINE NO.= 131 KP1= 82 TAN1= .0000 -1.0000 .0000
      KP2= 81 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 84 83
LINE NO.= 132 KP1= 84 TAN1= .7071 -.7071 .0000
      KP2= 83 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 86 85
LINE NO.= 133 KP1= 86 TAN1= 1.0000 .0000 .0000
      KP2= 85 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 88 87
LINE NO.= 134 KP1= 88 TAN1= .0000 -1.0000 .0000
      KP2= 87 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 90 89
LINE NO.= 135 KP1= 90 TAN1= .7071 -.7071 .0000
      KP2= 89 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 92 91
LINE NO.= 136 KP1= 92 TAN1= 1.0000 .0000 .0000
      KP2= 91 TAN2= -1.0000 .0000 .0000
      Guide steel

```

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 93 125 94 15
      (TRAVERSED IN SAME DIRECTION AS LINE 93)

```

AREA NUMBER = 27

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 95 126 96 125
      (TRAVERSED IN SAME DIRECTION AS LINE 95)

```

AREA NUMBER = 28

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 97 127 98 126
      (TRAVERSED IN SAME DIRECTION AS LINE 97)

```

AREA NUMBER = 29

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 99 17 100 127
      (TRAVERSED IN SAME DIRECTION AS LINE 99)

```

AREA NUMBER = 30

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 101 128 102 18
      (TRAVERSED IN SAME DIRECTION AS LINE 101)

```

AREA NUMBER = 31

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 103 129 104 128
      (TRAVERSED IN SAME DIRECTION AS LINE 103)

```

AREA NUMBER = 32

```

DEFINE AREA BY LIST OF LINES
LINE LIST = 105 130 106 129
      (TRAVERSED IN SAME DIRECTION AS LINE 105)

```

AREA NUMBER = 33

DEFINE AREA BY LIST OF LINES

LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)

AREA NUMBER = 34

DEFINE AREA BY LIST OF LINES

LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)

AREA NUMBER = 35

DEFINE AREA BY LIST OF LINES

LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)

AREA NUMBER = 36

DEFINE AREA BY LIST OF LINES

LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)

AREA NUMBER = 37

DEFINE AREA BY LIST OF LINES

LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)

AREA NUMBER = 38

DEFINE AREA BY LIST OF LINES

LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)

AREA NUMBER = 39

DEFINE AREA BY LIST OF LINES

LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)

AREA NUMBER = 40

DEFINE AREA BY LIST OF LINES

LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)

AREA NUMBER = 41

DEFINE AREA BY LIST OF LINES

LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)

AREA NUMBER = 42

Guide gaps

DEFINE AREA BY LIST OF LINES

LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)

AREA NUMBER = 43

DEFINE AREA BY LIST OF LINES

LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)

AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 94 X,Y,Z= .100000E-01 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 95 X,Y,Z= .170000 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 96 X,Y,Z= .170000 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 97 X,Y,Z= .135000E-01 .135000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 98 X,Y,Z= .135000E-01 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 99 X,Y,Z= .166500 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 100 X,Y,Z= .166500 .135000E-01 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 93 97
 LINE NO.= 141 KP1= 93 TAN1= -.7071 -.7071 .0000
 KP2= 97 TAN2= .7071 .7071 .0000

LINE CONNECTS KEYPOINTS 94 98
 LINE NO.= 142 KP1= 94 TAN1= -.7071 .7071 .0000
 KP2= 98 TAN2= .7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 100
 LINE NO.= 143 KP1= 96 TAN1= .7071 -.7071 .0000
 KP2= 100 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 95 99
 LINE NO.= 144 KP1= 95 TAN1= .7071 .7071 .0000
 KP2= 99 TAN2= -.7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 93
 LINE NO.= 145 KP1= 96 TAN1= 1.0000 .0000 .0000
 KP2= 93 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 100 97
 LINE NO.= 146 KP1= 100 TAN1= 1.0000 .0000 .0000
 KP2= 97 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 98 99
 LINE NO.= 147 KP1= 98 TAN1= -1.0000 .0000 .0000
 KP2= 99 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 94 95
 LINE NO.= 148 KP1= 94 TAN1= -1.0000 .0000 .0000
 KP2= 95 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 93 94
 LINE NO.= 149 KP1= 93 TAN1= .0000 -1.0000 .0000
 KP2= 94 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 97 98
 LINE NO.= 150 KP1= 97 TAN1= .0000 -1.0000 .0000
 KP2= 98 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 99 100
 LINE NO.= 151 KP1= 99 TAN1= .0000 1.0000 .0000
 KP2= 100 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 95 96
 LINE NO.= 152 KP1= 95 TAN1= .0000 1.0000 .0000
 KP2= 96 TAN2= .0000 -1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES

LINE LIST = 152 144 151 143
(TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES

LINE LIST = 148 142 147 144
(TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES

LINE LIST = 150 146 151 147
(TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55

Set element shapes and sizes for tubes
8x8 mesh in fuel with 2
divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
first fuel, then stainless tubes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
MAXIMUM NODE NUMBER = 81
MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
MAXIMUM NODE NUMBER = 145

MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
(A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290

MAXIMUM ELEMENT NUMBER = 256
(A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 435

MAXIMUM ELEMENT NUMBER = 384
(A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580

MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725

MAXIMUM ELEMENT NUMBER = 640
(A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870

MAXIMUM ELEMENT NUMBER = 768
(A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015

MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160

MAXIMUM ELEMENT NUMBER = 1024
(A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305

MAXIMUM ELEMENT NUMBER = 1152
(A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
MAXIMUM ELEMENT NUMBER = 1280
(A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
MAXIMUM ELEMENT NUMBER = 1536
(A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
MAXIMUM ELEMENT NUMBER = 1792
(A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
MAXIMUM ELEMENT NUMBER = 1920
(A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
MAXIMUM ELEMENT NUMBER = 2176
(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
 MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
 MAXIMUM ELEMENT NUMBER = 2432
 (A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
 MAXIMUM ELEMENT NUMBER = 2560
 (A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
 MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 66 TO 70 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
 MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
 Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

```
56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.340 TIME= 09:59:44
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.390 TIME= 09:59:44
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.660 TIME= 09:59:44
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.710 TIME= 09:59:44
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 5 TO 26 IN STEPS OF 1
```

NUMBER OF AREAS MESHD = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	
NODE 875	USED FOR NODES	3741	
NODE 874	USED FOR NODES	3742	

NODE	873	USED FOR NODES	3743		
NODE	1195	USED FOR NODES	1381		
NODE	1050	USED FOR NODES	1236		
NODE	801	USED FOR NODES	905		
NODE	107	USED FOR NODES	3565		
NODE	1091	USED FOR NODES	3550		
NODE	132	USED FOR NODES	615		
NODE	1340	USED FOR NODES	1526		
NODE	656	USED FOR NODES	760		
NODE	1194	USED FOR NODES	1382		
NODE	802	USED FOR NODES	904		
NODE	1049	USED FOR NODES	1237		
NODE	106	USED FOR NODES	3566		
NODE	133	USED FOR NODES	614		
NODE	1092	USED FOR NODES	3551		
NODE	1339	USED FOR NODES	1527		
NODE	657	USED FOR NODES	759		
NODE	1048	USED FOR NODES	1238		
NODE	134	USED FOR NODES	613		
NODE	803	USED FOR NODES	903		
NODE	105	USED FOR NODES	3567		
NODE	1093	USED FOR NODES	3552		
NODE	1193	USED FOR NODES	1383		
NODE	658	USED FOR NODES	758		
NODE	1338	USED FOR NODES	1528		
NODE	104	USED FOR NODES	3568		
NODE	1192	USED FOR NODES	1384		
NODE	804	USED FOR NODES	902		
NODE	135	USED FOR NODES	612		
NODE	1047	USED FOR NODES	1239		
NODE	1094	USED FOR NODES	3553		
NODE	1337	USED FOR NODES	1529		
NODE	659	USED FOR NODES	757		
NODE	660	USED FOR NODES	756		
NODE	1191	USED FOR NODES	1385		
NODE	103	USED FOR NODES	3569		
NODE	805	USED FOR NODES	901		
NODE	1095	USED FOR NODES	3554		
NODE	136	USED FOR NODES	611		
NODE	1336	USED FOR NODES	1530		
NODE	1046	USED FOR NODES	1240		
NODE	661	USED FOR NODES	755		
NODE	1096	USED FOR NODES	3555		
NODE	1190	USED FOR NODES	1386		
NODE	102	USED FOR NODES	3570		
NODE	806	USED FOR NODES	900		
NODE	137	USED FOR NODES	610		
NODE	1335	USED FOR NODES	1531		
NODE	1045	USED FOR NODES	1241		
NODE	662	USED FOR NODES	754		
NODE	1097	USED FOR NODES	3556		
NODE	138	USED FOR NODES	609		
NODE	1044	USED FOR NODES	1242		
NODE	1189	USED FOR NODES	1387		
NODE	807	USED FOR NODES	899		
NODE	101	USED FOR NODES	3571		
NODE	1334	USED FOR NODES	1532		
NODE	780	USED FOR NODES	1747		
NODE	120	USED FOR NODES	151		
NODE	119	USED FOR NODES	152		
NODE	118	USED FOR NODES	153		
NODE	117	USED FOR NODES	154		
NODE	923	USED FOR NODES	3210		
NODE	1503	USED FOR NODES	3499		
NODE	1504	USED FOR NODES	3498		
NODE	777	USED FOR NODES	898	1742	3203
NODE	1188	USED FOR NODES	1357	2031	2177
NODE	1358	USED FOR NODES	2184		
NODE	1359	USED FOR NODES	2183		
NODE	1360	USED FOR NODES	2182		

NODE	1361	USED FOR NODES	2181		
NODE	1362	USED FOR NODES	2180		
NODE	1363	USED FOR NODES	2179		
NODE	1364	USED FOR NODES	2178		
NODE	778	USED FOR NODES	1749		
NODE	779	USED FOR NODES	1748		
NODE	1505	USED FOR NODES	3497		
NODE	1506	USED FOR NODES	3496		
NODE	1043	USED FOR NODES	1212	1886	2032
NODE	1213	USED FOR NODES	2039		
NODE	781	USED FOR NODES	1746		
NODE	782	USED FOR NODES	1745		
NODE	783	USED FOR NODES	1744		
NODE	784	USED FOR NODES	1743		
NODE	1214	USED FOR NODES	2038		
NODE	1215	USED FOR NODES	2037		
NODE	1507	USED FOR NODES	3495		
NODE	1508	USED FOR NODES	3494		
NODE	1509	USED FOR NODES	3493		
NODE	1216	USED FOR NODES	2036		
NODE	1217	USED FOR NODES	2035		
NODE	1218	USED FOR NODES	2034		
NODE	635	USED FOR NODES	1602		
NODE	1219	USED FOR NODES	2033		
NODE	1074	USED FOR NODES	1888		
NODE	636	USED FOR NODES	1601		
NODE	637	USED FOR NODES	1600		
NODE	929	USED FOR NODES	3204		
NODE	638	USED FOR NODES	1599		
NODE	100	USED FOR NODES	146	3564	
NODE	639	USED FOR NODES	1598		
NODE	928	USED FOR NODES	3205		
NODE	1333	USED FOR NODES	1502	2176	3468
NODE	1478	USED FOR NODES	3492		
NODE	1067	USED FOR NODES	1887	3548	
NODE	116	USED FOR NODES	147	608	1596
NODE	922	USED FOR NODES	3191		
NODE	924	USED FOR NODES	3209		
NODE	925	USED FOR NODES	3208		
NODE	926	USED FOR NODES	3207		
NODE	927	USED FOR NODES	3206		
NODE	121	USED FOR NODES	150		
NODE	122	USED FOR NODES	149		
NODE	123	USED FOR NODES	148		
NODE	632	USED FOR NODES	753	1597	1741
NODE	1073	USED FOR NODES	1889		
NODE	1072	USED FOR NODES	1890		
NODE	1071	USED FOR NODES	1891		
NODE	1070	USED FOR NODES	1892		
NODE	1069	USED FOR NODES	1893		
NODE	1068	USED FOR NODES	1894		
NODE	634	USED FOR NODES	1603		
NODE	633	USED FOR NODES	1604		
NODE	1961	USED FOR NODES	3590		
NODE	1920	USED FOR NODES	2106		
NODE	1671	USED FOR NODES	1775		
NODE	180	USED FOR NODES	3605		
NODE	2210	USED FOR NODES	3469		
NODE	1816	USED FOR NODES	3234		
NODE	2065	USED FOR NODES	2251		
NODE	221	USED FOR NODES	1630		
NODE	1962	USED FOR NODES	3591		
NODE	179	USED FOR NODES	3606		
NODE	1919	USED FOR NODES	2107		
NODE	2209	USED FOR NODES	3470		
NODE	2064	USED FOR NODES	2252		
NODE	1672	USED FOR NODES	1774		
NODE	222	USED FOR NODES	1629		
NODE	1817	USED FOR NODES	3233		
NODE	1673	USED FOR NODES	1773		

NODE	178	USED FOR NODES	3607		
NODE	223	USED FOR NODES	1628		
NODE	1963	USED FOR NODES	3592		
NODE	1818	USED FOR NODES	3232		
NODE	1918	USED FOR NODES	2108		
NODE	2208	USED FOR NODES	3471		
NODE	2063	USED FOR NODES	2253		
NODE	1917	USED FOR NODES	2109		
NODE	177	USED FOR NODES	3608		
NODE	2207	USED FOR NODES	3472		
NODE	224	USED FOR NODES	1627		
NODE	1674	USED FOR NODES	1772		
NODE	1964	USED FOR NODES	3593		
NODE	1819	USED FOR NODES	3231		
NODE	2062	USED FOR NODES	2254		
NODE	1916	USED FOR NODES	2110		
NODE	176	USED FOR NODES	3609		
NODE	2206	USED FOR NODES	3473		
NODE	2061	USED FOR NODES	2255		
NODE	225	USED FOR NODES	1626		
NODE	1965	USED FOR NODES	3594		
NODE	1675	USED FOR NODES	1771		
NODE	1820	USED FOR NODES	3230		
NODE	1966	USED FOR NODES	3595		
NODE	175	USED FOR NODES	3610		
NODE	1821	USED FOR NODES	3229		
NODE	2205	USED FOR NODES	3474		
NODE	1915	USED FOR NODES	2111		
NODE	226	USED FOR NODES	1625		
NODE	1676	USED FOR NODES	1770		
NODE	2060	USED FOR NODES	2256		
NODE	1822	USED FOR NODES	3228		
NODE	174	USED FOR NODES	3611		
NODE	1967	USED FOR NODES	3596		
NODE	2204	USED FOR NODES	3475		
NODE	1914	USED FOR NODES	2112		
NODE	227	USED FOR NODES	1624		
NODE	2059	USED FOR NODES	2257		
NODE	1677	USED FOR NODES	1769		
NODE	199	USED FOR NODES	298		
NODE	198	USED FOR NODES	299		
NODE	1792	USED FOR NODES	2467	3227	
NODE	1793	USED FOR NODES	2474		
NODE	1939	USED FOR NODES	2618		
NODE	1938	USED FOR NODES	2619		
NODE	1794	USED FOR NODES	2473		
NODE	1913	USED FOR NODES	2082	2611	2757
NODE	1795	USED FOR NODES	2472		
NODE	1796	USED FOR NODES	2471		
NODE	1797	USED FOR NODES	2470		
NODE	1798	USED FOR NODES	2469		
NODE	1799	USED FOR NODES	2468		
NODE	2203	USED FOR NODES	2901	3442	
NODE	2058	USED FOR NODES	2227	2756	2902
NODE	2234	USED FOR NODES	2903		
NODE	173	USED FOR NODES	291	3604	
NODE	2083	USED FOR NODES	2764		
NODE	2233	USED FOR NODES	2904		
NODE	2232	USED FOR NODES	2905		
NODE	2231	USED FOR NODES	2906		
NODE	2230	USED FOR NODES	2907		
NODE	2229	USED FOR NODES	2908		
NODE	2084	USED FOR NODES	2763		
NODE	1937	USED FOR NODES	2612	3588	
NODE	2228	USED FOR NODES	2909		
NODE	1940	USED FOR NODES	2617		
NODE	1941	USED FOR NODES	2616		
NODE	1942	USED FOR NODES	2615		
NODE	2085	USED FOR NODES	2762		
NODE	1943	USED FOR NODES	2614		

NODE	2086	USED FOR NODES	2761		
NODE	1944	USED FOR NODES	2613		
NODE	2087	USED FOR NODES	2760		
NODE	197	USED FOR NODES	292	1623	2321
NODE	2088	USED FOR NODES	2759		
NODE	200	USED FOR NODES	297		
NODE	201	USED FOR NODES	296		
NODE	202	USED FOR NODES	295		
NODE	203	USED FOR NODES	294		
NODE	1647	USED FOR NODES	1768	2322	2466
NODE	1648	USED FOR NODES	2329		
NODE	1649	USED FOR NODES	2328		
NODE	204	USED FOR NODES	293		
NODE	1654	USED FOR NODES	2323		
NODE	1653	USED FOR NODES	2324		
NODE	1652	USED FOR NODES	2325		
NODE	1651	USED FOR NODES	2326		
NODE	2089	USED FOR NODES	2758		
NODE	1650	USED FOR NODES	2327		
NODE	325	USED FOR NODES	3645		
NODE	2686	USED FOR NODES	3630		
NODE	2790	USED FOR NODES	2976		
NODE	2541	USED FOR NODES	3258		
NODE	366	USED FOR NODES	2355		
NODE	2396	USED FOR NODES	2500		
NODE	2935	USED FOR NODES	3443		
NODE	2645	USED FOR NODES	2831		
NODE	2789	USED FOR NODES	2977		
NODE	324	USED FOR NODES	3646		
NODE	2542	USED FOR NODES	3257		
NODE	367	USED FOR NODES	2354		
NODE	2644	USED FOR NODES	2832		
NODE	2397	USED FOR NODES	2499		
NODE	2934	USED FOR NODES	3444		
NODE	2687	USED FOR NODES	3631		
NODE	323	USED FOR NODES	3647		
NODE	2398	USED FOR NODES	2498		
NODE	2643	USED FOR NODES	2833		
NODE	2688	USED FOR NODES	3632		
NODE	2788	USED FOR NODES	2978		
NODE	2543	USED FOR NODES	3256		
NODE	368	USED FOR NODES	2353		
NODE	2933	USED FOR NODES	3445		
NODE	2642	USED FOR NODES	2834		
NODE	322	USED FOR NODES	3648		
NODE	2787	USED FOR NODES	2979		
NODE	2399	USED FOR NODES	2497		
NODE	2544	USED FOR NODES	3255		
NODE	369	USED FOR NODES	2352		
NODE	2932	USED FOR NODES	3446		
NODE	2689	USED FOR NODES	3633		
NODE	2641	USED FOR NODES	2835		
NODE	321	USED FOR NODES	3649		
NODE	2786	USED FOR NODES	2980		
NODE	2400	USED FOR NODES	2496		
NODE	2931	USED FOR NODES	3447		
NODE	2545	USED FOR NODES	3254		
NODE	370	USED FOR NODES	2351		
NODE	2690	USED FOR NODES	3634		
NODE	320	USED FOR NODES	3650		
NODE	2785	USED FOR NODES	2981		
NODE	2401	USED FOR NODES	2495		
NODE	2640	USED FOR NODES	2836		
NODE	2546	USED FOR NODES	3253		
NODE	371	USED FOR NODES	2350		
NODE	2930	USED FOR NODES	3448		
NODE	2691	USED FOR NODES	3635		
NODE	319	USED FOR NODES	3651		
NODE	2692	USED FOR NODES	3636		
NODE	372	USED FOR NODES	2349		

NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		
NODE	3077	USED FOR NODES	3374		
NODE	514	USED FOR NODES	3329		

NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.480 TIME= 09:59:51
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 16.230 TIME= 09:59:53
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 16.250 TIME= 09:59:53
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38 USED FOR KEYPOINT(S)	150	
KEYPOINT	40 USED FOR KEYPOINT(S)	93	
KEYPOINT	41 USED FOR KEYPOINT(S)	155	198
KEYPOINT	43 USED FOR KEYPOINT(S)	96	101
KEYPOINT	44 USED FOR KEYPOINT(S)	203	238
KEYPOINT	46 USED FOR KEYPOINT(S)	105	109
KEYPOINT	47 USED FOR KEYPOINT(S)	243	262
KEYPOINT	49 USED FOR KEYPOINT(S)	113	117
KEYPOINT	50 USED FOR KEYPOINT(S)	267	
KEYPOINT	52 USED FOR KEYPOINT(S)	121	
KEYPOINT	54 USED FOR KEYPOINT(S)	142	
KEYPOINT	56 USED FOR KEYPOINT(S)	134	141
KEYPOINT	58 USED FOR KEYPOINT(S)	126	133
KEYPOINT	60 USED FOR KEYPOINT(S)	94	125
KEYPOINT	62 USED FOR KEYPOINT(S)	149	158
KEYPOINT	64 USED FOR KEYPOINT(S)	157	166
KEYPOINT	66 USED FOR KEYPOINT(S)	165	174
KEYPOINT	68 USED FOR KEYPOINT(S)	173	
KEYPOINT	69 USED FOR KEYPOINT(S)	147	
KEYPOINT	71 USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73 USED FOR KEYPOINT(S)	195	230
KEYPOINT	75 USED FOR KEYPOINT(S)	227	233
KEYPOINT	77 USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79 USED FOR KEYPOINT(S)	123	
KEYPOINT	81 USED FOR KEYPOINT(S)	265	
KEYPOINT	83 USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85 USED FOR KEYPOINT(S)	249	259
KEYPOINT	87 USED FOR KEYPOINT(S)	217	253
KEYPOINT	89 USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91 USED FOR KEYPOINT(S)	177	
KEYPOINT	95 USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107 USED FOR KEYPOINT(S)	110	185 221
KEYPOINT	131 USED FOR KEYPOINT(S)	137	182 189
KEYPOINT	153 USED FOR KEYPOINT(S)	163	197 206

KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254
LINE	58 USED FOR LINE(S)	235		
LINE	60 USED FOR LINE(S)	145		
LINE	61 USED FOR LINE(S)	307		
LINE	63 USED FOR LINE(S)	157		
LINE	64 USED FOR LINE(S)	367		
LINE	66 USED FOR LINE(S)	169		
LINE	67 USED FOR LINE(S)	403		
LINE	69 USED FOR LINE(S)	181		
LINE	76 USED FOR LINE(S)	213		
LINE	78 USED FOR LINE(S)	201		
LINE	80 USED FOR LINE(S)	189		
LINE	82 USED FOR LINE(S)	149		
LINE	84 USED FOR LINE(S)	225		
LINE	86 USED FOR LINE(S)	237		
LINE	88 USED FOR LINE(S)	249		
LINE	90 USED FOR LINE(S)	261		
LINE	95 USED FOR LINE(S)	220		
LINE	97 USED FOR LINE(S)	295		
LINE	103 USED FOR LINE(S)	340		
LINE	105 USED FOR LINE(S)	187		
LINE	111 USED FOR LINE(S)	397		
LINE	113 USED FOR LINE(S)	376		
LINE	119 USED FOR LINE(S)	325		
LINE	121 USED FOR LINE(S)	268		
LINE	137 USED FOR LINE(S)	223		

*** WARNING ***

Due to merge, line 137 is now meshed.
LINE 138 USED FOR LINE(S) 184

CP= 16.700 TIME= 09:59:54

*** WARNING ***

Due to merge, line 138 is now meshed.
LINE 139 USED FOR LINE(S) 400

CP= 16.700 TIME= 09:59:54

*** WARNING ***

Due to merge, line 139 is now meshed.
LINE 140 USED FOR LINE(S) 265

CP= 16.710 TIME= 09:59:54

*** WARNING ***

Due to merge, line 140 is now meshed.

CP= 16.720 TIME= 09:59:54

LINE	148 USED FOR LINE(S)	193
LINE	152 USED FOR LINE(S)	153
LINE	160 USED FOR LINE(S)	165
LINE	163 USED FOR LINE(S)	277
LINE	172 USED FOR LINE(S)	177
LINE	175 USED FOR LINE(S)	337
LINE	196 USED FOR LINE(S)	273
LINE	199 USED FOR LINE(S)	205
LINE	208 USED FOR LINE(S)	285
LINE	211 USED FOR LINE(S)	217
LINE	229 USED FOR LINE(S)	247
LINE	232 USED FOR LINE(S)	297
LINE	241 USED FOR LINE(S)	259
LINE	244 USED FOR LINE(S)	309
LINE	253 USED FOR LINE(S)	271
LINE	256 USED FOR LINE(S)	321
LINE	280 USED FOR LINE(S)	333
LINE	283 USED FOR LINE(S)	289
LINE	292 USED FOR LINE(S)	345
LINE	301 USED FOR LINE(S)	319
LINE	304 USED FOR LINE(S)	357
LINE	313 USED FOR LINE(S)	331
LINE	316 USED FOR LINE(S)	369
LINE	328 USED FOR LINE(S)	381
LINE	343 USED FOR LINE(S)	349
LINE	361 USED FOR LINE(S)	379

LINE 364 USED FOR LINE(S) 393
 LINE 373 USED FOR LINE(S) 391

Create mesh in UCF inner shell
 (L's 105,108 ????)

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 22 STEP 1

10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 23 TO 32 STEP 1

10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
 LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
 TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING *** CP= 17.800 TIME= 09:59:56
 Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE *** CP= 17.800 TIME= 09:59:56
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3327	3328	3329	3330	3331	3332	3333	3334	3335	3354
3355	3356	3357	3358	3359	3360	3361	3362	3363	3364
3365	3366	3367	3368	3402	3403	3404	3417	3418	3419
3453	3454	3455	3456	3457	3458	3459	3460	3461	3462
3463	3464	3465	3466	3467	3486	3487	3488	3489	3490
3491	3492	3493	3494						

*** WARNING *** CP= 18.600 TIME= 09:59:57
 Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE *** CP= 18.600 TIME= 09:59:57
 Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4375
 MAXIMUM ELEMENT NUMBER = 3680
 Delete concatenated lines
 (L's freed up 105,108 ????)
 LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 6 TO 7 STEP 1
 2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1
 350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 15

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4738
 MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 22.140 TIME= 10:00:05
 Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 22.180 TIME= 10:00:05
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 22.180 TIME= 10:00:05
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50	IN STEPS OF	1
** AREA	43 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **	
** AREA	44 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **	
** AREA	45 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **	
** AREA	46 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **	

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 27.400 TIME= 10:00:12
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 27.450 TIME= 10:00:12
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 27.450 TIME= 10:00:12
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES 14 TO 16 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4596

GENERATE NODES AND ELEMENTS

ON LINES 19 TO 21 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4620

GENERATE NODES AND ELEMENTS

ON LINES 24 TO 26 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4644

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.850

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET

XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.
DISPLAY TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.
DISPLAY TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.

DISPLAY TITLE=
44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=
44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:00:18 JUN 19, 1995 CP= 32.740
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM
260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD.
NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING *** CP= 32.970 TIME= 10:00:18
No space node defined. An enclosed system need not have a space node.
For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 43.940

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:00:29 JUN 19, 1995 CP= 43.940
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES

*** NOTE *** CP= 43.990 TIME= 10:00:30
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.990 TIME= 10:00:30
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.000 TIME= 10:00:30
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.000 TIME= 10:00:30
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.010 TIME= 10:00:30
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.010 TIME= 10:00:30
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.020 TIME= 10:00:30
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.020 TIME= 10:00:30
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.030 TIME= 10:00:30
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.030 TIME= 10:00:30
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.030 TIME= 10:00:30
Nodes cannot be cleared from line 74 because area 17 is meshed. Only
elements are deleted.

elements are deleted.

*** NOTE *** CP= 44.040 TIME= 10:00:30
Nodes cannot be cleared from line 92 because area 26 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.040 TIME= 10:00:30
Nodes cannot be cleared from line 93 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.040 TIME= 10:00:30
Nodes cannot be cleared from line 94 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.040 TIME= 10:00:30
Nodes cannot be cleared from line 96 because area 28 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.050 TIME= 10:00:30
Nodes cannot be cleared from line 98 because area 29 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.050 TIME= 10:00:30
Nodes cannot be cleared from line 100 because area 30 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.060 TIME= 10:00:30
Nodes cannot be cleared from line 102 because area 31 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.060 TIME= 10:00:30
Nodes cannot be cleared from line 104 because area 32 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.060 TIME= 10:00:30
Nodes cannot be cleared from line 106 because area 33 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.070 TIME= 10:00:30
Nodes cannot be cleared from line 107 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.070 TIME= 10:00:30
Nodes cannot be cleared from line 108 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.070 TIME= 10:00:30
Nodes cannot be cleared from line 109 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.080 TIME= 10:00:30
Nodes cannot be cleared from line 110 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.080 TIME= 10:00:30
Nodes cannot be cleared from line 112 because area 36 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.080 TIME= 10:00:30
Nodes cannot be cleared from line 114 because area 37 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.090 TIME= 10:00:30
Nodes cannot be cleared from line 116 because area 38 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.090 TIME= 10:00:30
Nodes cannot be cleared from line 118 because area 39 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.100 TIME= 10:00:30
Nodes cannot be cleared from line 120 because area 40 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.100 TIME= 10:00:30
Nodes cannot be cleared from line 122 because area 41 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.110 TIME= 10:00:30
Nodes cannot be cleared from line 123 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.110 TIME= 10:00:30
Nodes cannot be cleared from line 124 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.110 TIME= 10:00:30
Nodes cannot be cleared from line 137 because area 47 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.120 TIME= 10:00:30
Nodes cannot be cleared from line 138 because area 48 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.120 TIME= 10:00:30
Nodes cannot be cleared from line 139 because area 49 is meshed. Only elements are deleted.

*** NOTE *** CP= 44.120 TIME= 10:00:30
Nodes cannot be cleared from line 140 because area 50 is meshed. Only elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 44.130

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 44.160 TIME= 10:00:30
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO= 273.150

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

```
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1400304 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS.THIS LOAD STEP

TIME= .10000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 45.420 TIME= 10:00:31
All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:00:31 JUN 19, 1995 CP= 45.430
FOR SUPPORT CALL ROBERT BANNEY PHONE (702) 794-5337 FAX (702) 794-1844
```

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM. TEMP
 ANALYSIS TYPETRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO 273.15
 NEWTON-RAPHSON OPTIONPROGRAM CHOSEN

*** NOTE *** CP= 46.340 TIME= 10:00:32
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 46.750 TIME= 10:00:33
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER. 1
 TIME AT END OF THE LOAD STEP.10000E-05
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 0
 MAXIMUM NUMBER OF SUBSTEPS 0
 MINIMUM NUMBER OF SUBSTEPS 1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
 STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS OFF
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4045.5

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .33687	IXX = 641.6	IXX = 641.6
YC = .11253E-10	IYY = 641.6	IYY = 182.5
ZC = .00000E+00	IZZ = 1283.	IZZ = 824.0
	IXY = .1364E-12	IXY = .1534E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4045.51

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 63.900 TIME= 10:00:51
 Coefficient ratio exceeds 1.0e8 Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	11.660	.003
18	1	MATRIX50	.080	.080

Time at end of element matrix formulation CP= 63.9.
HT FLOW CONVERGENCE VALUE= 9967. CRITERION= 9.967

Estimated number of active DOF= 4513.
Maximum wavefront= 311.

Time at end of matrix triangularization CP= 82.11.
Equation solver maximum pivot= 835.577491 at node 3669 TEMP.
Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 237.7
HT FLOW CONVERGENCE VALUE= 108.3 CRITERION= .4238
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -48.29
HT FLOW CONVERGENCE VALUE= 10.17 CRITERION= .4119
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 5.127
HT FLOW CONVERGENCE VALUE= .6486 CRITERION= .4092
EQUIL ITER 4 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3757
HT FLOW CONVERGENCE VALUE= .3372E-01 CRITERION= .4091 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	6.640	.001
18	1	MATRIX50	.130	.130

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.930	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4
*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS
ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 4513
R.M.S. WAVEFRONT SIZE = 152.0

*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44w.emat
2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44w.esav
5.219 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44w.tri
.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44w.dsub
2.484 MB WRITTEN ON RESULTS FILE: ucf44w.rth
Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1
2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121. NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.768 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.821 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 68.864 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 211.000 TIME= 10:03:24
This load step will be a static (steady-state) step.

*** NOTE *** CP= 211.410 TIME= 10:03:25
The step data was checked and warning messages were found.
Please review output or errors file (ucf44w.err) for these warning
messages.

*** NOTE *** CP= 211.410 TIME= 10:03:25
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:03:25 JUN 19, 1995 CP= 211.410
FOR SUPPORT CALL ROBERT BANNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 0
MAXIMUM NUMBER OF SUBSTEPS 0
MINIMUM NUMBER OF SUBSTEPS 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS OFF
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1627E+05 CRITERION= 16.27
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 42.92
HT FLOW CONVERGENCE VALUE= 33.68 CRITERION= .4040
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.17
HT FLOW CONVERGENCE VALUE= 3.139 CRITERION= .4001
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.415
HT FLOW CONVERGENCE VALUE= .1860 CRITERION= .3994 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3

*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7

*** TIME = .200000E-05 TIME INC = .100000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS

FOR AUTOMATIC TIME STEPPING:

USE 40 SUBSTEPS AS A MAXIMUM

USE 5 SUBSTEPS AS A MINIMUM

USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP

AS THE STARTING TIME STEP SIZE.

Begin Transient

Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=

IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM

22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .00000C000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.768 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.821 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 68.864 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 321.940 TIME= 10:05:21
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:05:21 JUN 19, 1995 CP= 321.940
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 3
TIME AT END OF THE LOAD STEP. 31.558
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE=.1860 CRITERION=.3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2091E-03

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HT FLOW CONVERGENCE VALUE= .6035E-05 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 1 COMPLETED. CUM ITER = 8
*** TIME = .788942 TIME INC = .788940
*** RESPONSE EIGENVALUE = .1928 OSCILLATION LIMIT = .1521
*** AUTO STEP TIME: NEXT TIME INC = .78894 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3517 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2661E-03
HT FLOW CONVERGENCE VALUE= .8811E-05 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
*** TIME = 1.57788 TIME INC = .788940
*** RESPONSE EIGENVALUE = .1128 OSCILLATION LIMIT = .8898E-01
*** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3310 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3714E-03
HT FLOW CONVERGENCE VALUE= .1629E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
*** TIME = 3.94470 TIME INC = 2.36682
*** RESPONSE EIGENVALUE = .3816E-01 OSCILLATION LIMIT = .9031E-01
*** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3117 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2269E-03
HT FLOW CONVERGENCE VALUE= .3492E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
*** TIME = 10.2562 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .6283E-02 OSCILLATION LIMIT = .3966E-01
*** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3027 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1644E-03
HT FLOW CONVERGENCE VALUE= .3161E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
*** TIME = 16.5677 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .2162E-02 OSCILLATION LIMIT = .1365E-01
*** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .2990 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1641E-03
HT FLOW CONVERGENCE VALUE= .3073E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
*** TIME = 22.8793 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .1940E-02 OSCILLATION LIMIT = .1224E-01
*** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .2956 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1638E-03
HT FLOW CONVERGENCE VALUE= .3010E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
*** TIME = 29.1908 TIME INC = 6.31152
*** RESPONSE EIGENVALUE = .1829E-02 OSCILLATION LIMIT = .1155E-01
*** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2924 CRITERION= .3994
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6137E-04
HT FLOW CONVERGENCE VALUE= .1117E-04 CRITERION= .3994 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
*** TIME = 31.5576 TIME INC = 2.36682
*** RESPONSE EIGENVALUE = .1778E-02 OSCILLATION LIMIT = .4209E-02

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 10:13:17 JUN 19, 1995 CP= 767.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 246.4 CRITERION= .4693
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7036
 HT FLOW CONVERGENCE VALUE= .4093 CRITERION= .3978
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7912E-01
 HT FLOW CONVERGENCE VALUE= .2761E-01 CRITERION= .3978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1116E-04 OSCILLATION LIMIT = .8806
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 246.8 CRITERION= .4681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7057
 HT FLOW CONVERGENCE VALUE= .4880 CRITERION= .3983
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1067
 HT FLOW CONVERGENCE VALUE= .2956E-01 CRITERION= .3983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1007E-05 OSCILLATION LIMIT = .7948E-01
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 739.1 CRITERION= .8396
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.111
 HT FLOW CONVERGENCE VALUE= 1.387 CRITERION= .3973
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4026
 HT FLOW CONVERGENCE VALUE= .1157 CRITERION= .3973 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1526E-05 OSCILLATION LIMIT = .3611
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 739.4 CRITERION= .8392
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.111
 HT FLOW CONVERGENCE VALUE= 1.415 CRITERION= .3972
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4098
 HT FLOW CONVERGENCE VALUE= .1165 CRITERION= .3972 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 631184. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1256E-05 OSCILLATION LIMIT = .2973
 *** AUTO TIME STEP: NEXT TIME INC = .39801E+06 INCREASED (FACTOR = 1.6816)

HT FLOW CONVERGENCE VALUE= 1242. CRITERION= 1.304
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.647 CRITERION= .3959
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7437
 HT FLOW CONVERGENCE VALUE= .2140 CRITERION= .3958 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .102919E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1402E-05 OSCILLATION LIMIT = .5579
 *** AUTO STEP TIME: NEXT TIME INC = .39801E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1243. CRITERION= 1.304
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.597 CRITERION= .3956
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7472

HT FLOW CONVERGENCE VALUE= .2152 CRITERION= .3955 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .142720E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1290E-05 OSCILLATION LIMIT = .5136
 *** AUTO STEP TIME: NEXT TIME INC = .39801E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1242. CRITERION= 1.303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.724 CRITERION= .3941
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7454
 HT FLOW CONVERGENCE VALUE= .2159 CRITERION= .3941 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .182521E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1325E-05 OSCILLATION LIMIT = .5272
 *** AUTO STEP TIME: NEXT TIME INC = .39801E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1242. CRITERION= 1.303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.785 CRITERION= .3938
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7436
 HT FLOW CONVERGENCE VALUE= .2173 CRITERION= .3937 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .222322E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1282E-05 OSCILLATION LIMIT = .5102
 *** AUTO STEP TIME: NEXT TIME INC = .39801E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1241. CRITERION= 1.302
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.733 CRITERION= .3924
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7385
 HT FLOW CONVERGENCE VALUE= .2177 CRITERION= .3923 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .262123E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1305E-05 OSCILLATION LIMIT = .5193
 *** AUTO STEP TIME: NEXT TIME INC = .39801E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1241. CRITERION= 1.302
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.549
 HT FLOW CONVERGENCE VALUE= 2.766 CRITERION= .3920
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7423
 HT FLOW CONVERGENCE VALUE= .2250 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 10 COMPLETED. CUM ITER = 35
 *** TIME = .301924E+07 TIME INC = 398010.
 *** RESPONSE EIGENVALUE = .1274E-05 OSCILLATION LIMIT = .5073
 *** AUTO TIME STEP: NEXT TIME INC = .13655E+06 DECREASED (FACTOR = .3431)

HT FLOW CONVERGENCE VALUE= 425.7 CRITERION= .5787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.218
 HT FLOW CONVERGENCE VALUE= 1.096 CRITERION= .3910
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2095
 HT FLOW CONVERGENCE VALUE= .6520E-01 CRITERION= .3911 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 11 COMPLETED. CUM ITER = 37
 *** TIME = .315579E+07 TIME INC = 136551.
 *** RESPONSE EIGENVALUE = .1215E-05 OSCILLATION LIMIT = .1659

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 10:29:43 JUN 19, 1995 CP= 1666.490
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44-BWR UCF/Waste Package with 10 yr old; 49 GMD/MTU SNF

HT FLOW CONVERGENCE VALUE= 72.89 CRITERION= .3978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5041
 HT FLOW CONVERGENCE VALUE= .2632 CRITERION= .3928 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 38
 *** TIME = .329234E+07 TIME INC = 136551.
 *** RESPONSE EIGENVALUE = .8362E-05 OSCILLATION LIMIT = 1.142
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .5778)

HT FLOW CONVERGENCE VALUE= 41.58 CRITERION= .3950
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .8535E-01 CRITERION= .3915 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 39
 *** TIME = .337124E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8674E-04 OSCILLATION LIMIT = 6.843
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.28 CRITERION= .3938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1272
 HT FLOW CONVERGENCE VALUE= .1138 CRITERION= .3925 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 40
 *** TIME = .345013E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1459E-04 OSCILLATION LIMIT = 1.151
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.58 CRITERION= .3947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9836E-01 CRITERION= .3914 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 41
 *** TIME = .352902E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1741E-04 OSCILLATION LIMIT = 1.373
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.27 CRITERION= .3937
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1241
 HT FLOW CONVERGENCE VALUE= .1129 CRITERION= .3923 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 42
 *** TIME = .360792E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1330E-04 OSCILLATION LIMIT = 1.049
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.58 CRITERION= .3945
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9571E-01 CRITERION= .3913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 43
 *** TIME = .368681E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1580E-04 OSCILLATION LIMIT = 1.246
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.27 CRITERION= .3936
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1224
 HT FLOW CONVERGENCE VALUE= .1100 CRITERION= .3922 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 44
 *** TIME = .376571E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1202E-04 OSCILLATION LIMIT = .9481
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.59 CRITERION= .3944
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9767E-01 CRITERION= .3912 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 8 COMPLETED. CUM ITER = 45
 *** TIME = .384460E+07 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1405E-04 OSCILLATION LIMIT = 1.108
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.27 CRITERION= .3934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1212
 HT FLOW CONVERGENCE VALUE= .1094 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 9 COMPLETED. CUM ITER = 46
 *** TIME = .392349E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1118E-04 OSCILLATION LIMIT = .8817
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.59 CRITERION= .3942
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9837E-01 CRITERION= .3911 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 10 COMPLETED. CUM ITER = 47
 *** TIME = .400239E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1271E-04 OSCILLATION LIMIT = 1.002
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.26 CRITERION= .3933
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1203
 HT FLOW CONVERGENCE VALUE= .1090 CRITERION= .3919 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 11 COMPLETED. CUM ITER = 48
 *** TIME = .408128E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = .8259
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.60 CRITERION= .3941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9861E-01 CRITERION= .3910 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 12 COMPLETED. CUM ITER = 49
 *** TIME = .416018E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1165E-04 OSCILLATION LIMIT = .9189
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.26 CRITERION= .3932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1200
 HT FLOW CONVERGENCE VALUE= .1076 CRITERION= .3918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 13 COMPLETED. CUM ITER = 50
 *** TIME = .423907E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9858E-05 OSCILLATION LIMIT = .7778
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.60 CRITERION= .3940
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9779E-01 CRITERION= .3909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 14 COMPLETED. CUM ITER = 51
 *** TIME = .431796E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = .8511
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.26 CRITERION= .3931
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1197
 HT FLOW CONVERGENCE VALUE= .1065 CRITERION= .3916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 15 COMPLETED. CUM ITER = 52
 *** TIME = .439686E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9309E-05 OSCILLATION LIMIT = .7344
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.60 CRITERION= .3938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9569E-01 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP      5  SUBSTEP    16 COMPLETED.    CUM ITER =    53
*** TIME = .447575E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1007E-04    OSCILLATION LIMIT = .7942
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.25    CRITERION= .3930
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1195
    HT FLOW CONVERGENCE VALUE= .1048    CRITERION= .3915    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    17 COMPLETED.    CUM ITER =    54
*** TIME = .455465E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8815E-05    OSCILLATION LIMIT = .6955
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.61    CRITERION= .3937
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
    HT FLOW CONVERGENCE VALUE= .9663E-01 CRITERION= .3906    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    18 COMPLETED.    CUM ITER =    55
*** TIME = .463354E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9457E-05    OSCILLATION LIMIT = .7461
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.25    CRITERION= .3929
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1193
    HT FLOW CONVERGENCE VALUE= .1037    CRITERION= .3914    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    19 COMPLETED.    CUM ITER =    56
*** TIME = .471243E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8381E-05    OSCILLATION LIMIT = .6612
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.61    CRITERION= .3936
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
    HT FLOW CONVERGENCE VALUE= .9623E-01 CRITERION= .3905    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    20 COMPLETED.    CUM ITER =    57
*** TIME = .479133E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8902E-05    OSCILLATION LIMIT = .7023
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.24    CRITERION= .3928
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1190
    HT FLOW CONVERGENCE VALUE= .1039    CRITERION= .3912    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    21 COMPLETED.    CUM ITER =    58
*** TIME = .487022E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7979E-05    OSCILLATION LIMIT = .6295
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.61    CRITERION= .3935
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
    HT FLOW CONVERGENCE VALUE= .9617E-01 CRITERION= .3904    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    22 COMPLETED.    CUM ITER =    59
*** TIME = .494912E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8408E-05    OSCILLATION LIMIT = .6634
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 42.24    CRITERION= .3927
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1188
    HT FLOW CONVERGENCE VALUE= .1037    CRITERION= .3911    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP    23 COMPLETED.    CUM ITER =    60
*** TIME = .502801E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7607E-05    OSCILLATION LIMIT = .6002
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 41.62    CRITERION= .3933
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113

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HT FLOW CONVERGENCE VALUE= .9750E-01 CRITERION= .3903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 61
 *** TIME = .510690E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7986E-05 OSCILLATION LIMIT = .6301
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.24 CRITERION= .3926
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1186
 HT FLOW CONVERGENCE VALUE= .1043 CRITERION= .3910 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 62
 *** TIME = .518580E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7269E-05 OSCILLATION LIMIT = .5735
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.62 CRITERION= .3932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9747E-01 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 63
 *** TIME = .526469E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7601E-05 OSCILLATION LIMIT = .5997
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.24 CRITERION= .3925
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1183
 HT FLOW CONVERGENCE VALUE= .1039 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 64
 *** TIME = .534359E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6962E-05 OSCILLATION LIMIT = .5492
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.63 CRITERION= .3931
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9721E-01 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 65
 *** TIME = .542248E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7249E-05 OSCILLATION LIMIT = .5719
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.24 CRITERION= .3923
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1181
 HT FLOW CONVERGENCE VALUE= .1035 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 66
 *** TIME = .550137E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6668E-05 OSCILLATION LIMIT = .5260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.63 CRITERION= .3929
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9726E-01 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 67
 *** TIME = .558027E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6934E-05 OSCILLATION LIMIT = .5470
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.23 CRITERION= .3922
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1179
 HT FLOW CONVERGENCE VALUE= .1033 CRITERION= .3906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 68
 *** TIME = .565916E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6400E-05 OSCILLATION LIMIT = .5049
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.64 CRITERION= .3928
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9768E-01 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 32 COMPLETED. CUM ITER = 69
 *** TIME = .573806E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6647E-05 OSCILLATION LIMIT = .5244
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.23 CRITERION= .3921
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1177
 HT FLOW CONVERGENCE VALUE= .1036 CRITERION= .3905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 33 COMPLETED. CUM ITER = 70
 *** TIME = .581695E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6149E-05 OSCILLATION LIMIT = .4852
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.64 CRITERION= .3927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9838E-01 CRITERION= .3897 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 34 COMPLETED. CUM ITER = 71
 *** TIME = .589584E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6385E-05 OSCILLATION LIMIT = .5037
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.23 CRITERION= .3920
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1175
 HT FLOW CONVERGENCE VALUE= .1038 CRITERION= .3903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 35 COMPLETED. CUM ITER = 72
 *** TIME = .597474E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5918E-05 OSCILLATION LIMIT = .4669
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.65 CRITERION= .3926
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9766E-01 CRITERION= .3896 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 36 COMPLETED. CUM ITER = 73
 *** TIME = .605363E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6147E-05 OSCILLATION LIMIT = .4850
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.23 CRITERION= .3919
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1173
 HT FLOW CONVERGENCE VALUE= .9831E-01 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 37 COMPLETED. CUM ITER = 74
 *** TIME = .613253E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5697E-05 OSCILLATION LIMIT = .4495
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.65 CRITERION= .3924
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113
 HT FLOW CONVERGENCE VALUE= .9187E-01 CRITERION= .3895 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 38 COMPLETED. CUM ITER = 75
 *** TIME = .621142E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5942E-05 OSCILLATION LIMIT = .4688
 *** AUTO TIME STEP: NEXT TIME INC = 50066. DECREASED (FACTOR = .6346)

HT FLOW CONVERGENCE VALUE= 26.92 CRITERION= .3904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7652E-01
 HT FLOW CONVERGENCE VALUE= .6088E-01 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 39 COMPLETED. CUM ITER = 76
 *** TIME = .626149E+07 TIME INC = 50065.5
 *** RESPONSE EIGENVALUE = .1145E-04 OSCILLATION LIMIT = .5733

*** AUTO STEP TIME: NEXT TIME INC = 50066. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.35 CRITERION= .3910
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7061E-01
 HT FLOW CONVERGENCE VALUE= .5595E-01 CRITERION= .3894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 40 COMPLETED. CUM ITER = 77
 *** TIME = .631155E+07 TIME INC = 50065.5
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = .6080

***** ANSYS SOLVE COMPAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 11:08:57 JUN 19, 1995 CP= 3874.350
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3902
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6996E-01
 HT FLOW CONVERGENCE VALUE= .5884E-01 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 78
 *** TIME = .639045E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9191E-05 OSCILLATION LIMIT = .7251
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.78 CRITERION= .3908
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4844E-01 CRITERION= .3894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 79
 *** TIME = .646934E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1890E-04 OSCILLATION LIMIT = 1.491
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6941E-01
 HT FLOW CONVERGENCE VALUE= .5474E-01 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 3 COMPLETED. CUM ITER = 80
 *** TIME = .654823E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1302E-04 OSCILLATION LIMIT = 1.027
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.78 CRITERION= .3907
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4928E-01 CRITERION= .3893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 4 COMPLETED. CUM ITER = 81
 *** TIME = .662713E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1527E-04 OSCILLATION LIMIT = 1.204
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6923E-01
 HT FLOW CONVERGENCE VALUE= .5409E-01 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 5 COMPLETED. CUM ITER = 82
 *** TIME = .670602E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1270E-04 OSCILLATION LIMIT = 1.002
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.78 CRITERION= .3906
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4884E-01 CRITERION= .3892 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 6 COMPLETED. CUM ITER = 83

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*** TIME = .678492E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1458E-04    OSCILLATION LIMIT = 1.150
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.36    CRITERION= .3900
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6906E-01
    HT FLOW CONVERGENCE VALUE= .5340E-01 CRITERION= .3898    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 7 COMPLETED. CUM ITER = 84
*** TIME = .686381E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1222E-04    OSCILLATION LIMIT = .9639
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.79    CRITERION= .3905
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
    HT FLOW CONVERGENCE VALUE= .4880E-01 CRITERION= .3891    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 8 COMPLETED. CUM ITER = 85
*** TIME = .694270E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1394E-04    OSCILLATION LIMIT = 1.100
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.36    CRITERION= .3899
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6890E-01
    HT FLOW CONVERGENCE VALUE= .5327E-01 CRITERION= .3897    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 9 COMPLETED. CUM ITER = 86
*** TIME = .702160E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1176E-04    OSCILLATION LIMIT = .9280
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.79    CRITERION= .3904
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
    HT FLOW CONVERGENCE VALUE= .4838E-01 CRITERION= .3890    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 10 COMPLETED. CUM ITER = 87
*** TIME = .710049E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1337E-04    OSCILLATION LIMIT = 1.054
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.36    CRITERION= .3898
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6875E-01
    HT FLOW CONVERGENCE VALUE= .5286E-01 CRITERION= .3895    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 11 COMPLETED. CUM ITER = 88
*** TIME = .717939E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1133E-04    OSCILLATION LIMIT = .8938
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.80    CRITERION= .3903
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
    HT FLOW CONVERGENCE VALUE= .4850E-01 CRITERION= .3889    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 12 COMPLETED. CUM ITER = 89
*** TIME = .725828E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1285E-04    OSCILLATION LIMIT = 1.014
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.36    CRITERION= .3897
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6860E-01
    HT FLOW CONVERGENCE VALUE= .5182E-01 CRITERION= .3894    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 13 COMPLETED. CUM ITER = 90
*** TIME = .733717E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1094E-04    OSCILLATION LIMIT = .8628
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.80    CRITERION= .3902
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
    HT FLOW CONVERGENCE VALUE= .4739E-01 CRITERION= .3888    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 14 COMPLETED. CUM ITER = 91
*** TIME = .741607E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1237E-04 OSCILLATION LIMIT = .9760
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.36 CRITERION= .3896
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6846E-01
HT FLOW CONVERGENCE VALUE= .5131E-01 CRITERION= .3893 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 15 COMPLETED. CUM ITER = 92
*** TIME = .749496E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1056E-04 OSCILLATION LIMIT = .8327
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.81 CRITERION= .3901
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
HT FLOW CONVERGENCE VALUE= .4721E-01 CRITERION= .3887 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 93
*** TIME = .757386E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1192E-04 OSCILLATION LIMIT = .9406
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.36 CRITERION= .3895
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6832E-01
HT FLOW CONVERGENCE VALUE= .5037E-01 CRITERION= .3892 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 94
*** TIME = .765275E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1019E-04 OSCILLATION LIMIT = .8039
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.81 CRITERION= .3900
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
HT FLOW CONVERGENCE VALUE= .4655E-01 CRITERION= .3886 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 95
*** TIME = .773164E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1152E-04 OSCILLATION LIMIT = .9085
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.36 CRITERION= .3894
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6818E-01
HT FLOW CONVERGENCE VALUE= .5005E-01 CRITERION= .3891 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 96
*** TIME = .781054E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9842E-05 OSCILLATION LIMIT = .7765
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.82 CRITERION= .3899
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
HT FLOW CONVERGENCE VALUE= .4642E-01 CRITERION= .3885 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 97
*** TIME = .788943E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1112E-04 OSCILLATION LIMIT = .8774
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3893
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6805E-01
HT FLOW CONVERGENCE VALUE= .4944E-01 CRITERION= .3890 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 98
*** TIME = .796833E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9519E-05 OSCILLATION LIMIT = .7510
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.82 CRITERION= .3897

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4587E-01 CRITERION= .3884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 99
 *** TIME = .804722E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1075E-04 OSCILLATION LIMIT = .8484
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6792E-01
 HT FLOW CONVERGENCE VALUE= .4877E-01 CRITERION= .3889 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 100
 *** TIME = .812611E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9202E-05 OSCILLATION LIMIT = .7260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.83 CRITERION= .3896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4537E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 101
 *** TIME = .820501E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1042E-04 OSCILLATION LIMIT = .8224
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6780E-01
 HT FLOW CONVERGENCE VALUE= .4839E-01 CRITERION= .3888 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 25 COMPLETED. CUM ITER = 102
 *** TIME = .828390E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8898E-05 OSCILLATION LIMIT = .7020
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.83 CRITERION= .3895
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4505E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 26 COMPLETED. CUM ITER = 103
 *** TIME = .836280E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1010E-04 OSCILLATION LIMIT = .7968
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6768E-01
 HT FLOW CONVERGENCE VALUE= .4795E-01 CRITERION= .3887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 27 COMPLETED. CUM ITER = 104
 *** TIME = .844169E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = .6805
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4500E-01 CRITERION= .3882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 28 COMPLETED. CUM ITER = 105
 *** TIME = .852058E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9786E-05 OSCILLATION LIMIT = .7720
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6756E-01
 HT FLOW CONVERGENCE VALUE= .4845E-01 CRITERION= .3886 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 29 COMPLETED. CUM ITER = 106
 *** TIME = .859948E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8373E-05 OSCILLATION LIMIT = .6605
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4521E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 30 COMPLETED. CUM ITER = 107
 *** TIME = .867837E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9501E-05 OSCILLATION LIMIT = .7495
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6744E-01
 HT FLOW CONVERGENCE VALUE= .4773E-01 CRITERION= .3885 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 31 COMPLETED. CUM ITER = 108
 *** TIME = .875727E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8134E-05 OSCILLATION LIMIT = .6417
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4495E-01 CRITERION= .3880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 32 COMPLETED. CUM ITER = 109
 *** TIME = .883616E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9241E-05 OSCILLATION LIMIT = .7290
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3887
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6733E-01
 HT FLOW CONVERGENCE VALUE= .4765E-01 CRITERION= .3884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 33 COMPLETED. CUM ITER = 110
 *** TIME = .891505E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7898E-05 OSCILLATION LIMIT = .6231
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4497E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 34 COMPLETED. CUM ITER = 111
 *** TIME = .899395E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8969E-05 OSCILLATION LIMIT = .7076
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.37 CRITERION= .3886
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6722E-01
 HT FLOW CONVERGENCE VALUE= .4758E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 35 COMPLETED. CUM ITER = 112
 *** TIME = .907284E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7686E-05 OSCILLATION LIMIT = .6064
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4500E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 36 COMPLETED. CUM ITER = 113
 *** TIME = .915174E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8710E-05 OSCILLATION LIMIT = .6872
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.38 CRITERION= .3885
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6712E-01
 HT FLOW CONVERGENCE VALUE= .4753E-01 CRITERION= .3882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 37 COMPLETED. CUM ITER = 114
 *** TIME = .923063E+07 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .7485E-05 OSCILLATION LIMIT = .5905
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4506E-01 CRITERION= .3877 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 38 COMPLETED. CUM ITER = 115
 *** TIME = .930952E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8466E-05 OSCILLATION LIMIT = .6679
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.38 CRITERION= .3884
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6701E-01
 HT FLOW CONVERGENCE VALUE= .4753E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 39 COMPLETED. CUM ITER = 116
 *** TIME = .938842E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7297E-05 OSCILLATION LIMIT = .5757
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88 CRITERION= .3888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6343E-01
 HT FLOW CONVERGENCE VALUE= .4508E-01 CRITERION= .3876 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 40 COMPLETED. CUM ITER = 117
 *** TIME = .946731E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8237E-05 OSCILLATION LIMIT = .6498

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 11:56:52 JUN 19, 1995 CP= 6104.170
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.29 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4842E-01
 HT FLOW CONVERGENCE VALUE= .3432E-01 CRITERION= .3880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 118
 *** TIME = .954621E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = .8460
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.78 CRITERION= .3883
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .2993E-01 CRITERION= .3875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 119
 *** TIME = .962510E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1875E-04 OSCILLATION LIMIT = 1.480
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.29 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4818E-01
 HT FLOW CONVERGENCE VALUE= .3343E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 120
 *** TIME = .970399E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1245E-04 OSCILLATION LIMIT = .9819
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.78 CRITERION= .3882
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3060E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP      7  SUBSTEP      4  COMPLETED.    CUM ITER =   121
*** TIME = .978289E+07    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1537E-04    OSCILLATION LIMIT =  1.212
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  17.29    CRITERION= .3878
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4808E-01
    HT FLOW CONVERGENCE VALUE= .3328E-01 CRITERION= .3878    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP      5  COMPLETED.    CUM ITER =   122
*** TIME = .986178E+07    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1248E-04    OSCILLATION LIMIT = .9843
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  16.79    CRITERION= .3881
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
    HT FLOW CONVERGENCE VALUE= .3068E-01 CRITERION= .3873    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP      6  COMPLETED.    CUM ITER =   123
*** TIME = .994068E+07    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1484E-04    OSCILLATION LIMIT =  1.170
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  17.29    CRITERION= .3877
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4798E-01
    HT FLOW CONVERGENCE VALUE= .3320E-01 CRITERION= .3877    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP      7  COMPLETED.    CUM ITER =   124
*** TIME = .100196E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1214E-04    OSCILLATION LIMIT = .9577
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  16.79    CRITERION= .3880
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
    HT FLOW CONVERGENCE VALUE= .3073E-01 CRITERION= .3872    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP      8  COMPLETED.    CUM ITER =   125
*** TIME = .100985E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1436E-04    OSCILLATION LIMIT =  1.133
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  17.29    CRITERION= .3876
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4788E-01
    HT FLOW CONVERGENCE VALUE= .3314E-01 CRITERION= .3876    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP      9  COMPLETED.    CUM ITER =   126
*** TIME = .101774E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1183E-04    OSCILLATION LIMIT = .9331
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  16.80    CRITERION= .3879
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
    HT FLOW CONVERGENCE VALUE= .3077E-01 CRITERION= .3871    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP     10  COMPLETED.    CUM ITER =   127
*** TIME = .102563E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1391E-04    OSCILLATION LIMIT =  1.098
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  17.30    CRITERION= .3875
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4779E-01
    HT FLOW CONVERGENCE VALUE= .3308E-01 CRITERION= .3875    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP      7  SUBSTEP     11  COMPLETED.    CUM ITER =   128
*** TIME = .103351E+08    TIME INC =  78894.0
*** RESPONSE EIGENVALUE = .1153E-04    OSCILLATION LIMIT = .9093
*** AUTO STEP TIME: NEXT TIME INC =  78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE=  16.80    CRITERION= .3878
    EQUIL ITER  1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01

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HT FLOW CONVERGENCE VALUE= .3081E-01 CRITERION= .3870 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 129
 *** TIME = .104140E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 1.065
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4769E-01
 HT FLOW CONVERGENCE VALUE= .3302E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 130
 *** TIME = .104929E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1124E-04 OSCILLATION LIMIT = .8865
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.80 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3084E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 14 COMPLETED. CUM ITER = 131
 *** TIME = .105718E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1312E-04 OSCILLATION LIMIT = 1.035
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4761E-01
 HT FLOW CONVERGENCE VALUE= .3297E-01 CRITERION= .3873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 15 COMPLETED. CUM ITER = 132
 *** TIME = .106507E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1096E-04 OSCILLATION LIMIT = .8646
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.81 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3086E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 16 COMPLETED. CUM ITER = 133
 *** TIME = .107296E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1275E-04 OSCILLATION LIMIT = 1.006
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4752E-01
 HT FLOW CONVERGENCE VALUE= .3292E-01 CRITERION= .3872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 17 COMPLETED. CUM ITER = 134
 *** TIME = .108085E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1069E-04 OSCILLATION LIMIT = .8438
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.81 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3088E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 18 COMPLETED. CUM ITER = 135
 *** TIME = .108874E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1241E-04 OSCILLATION LIMIT = .9792
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4744E-01
 HT FLOW CONVERGENCE VALUE= .3287E-01 CRITERION= .3871 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 19 COMPLETED. CUM ITER = 136
 *** TIME = .109663E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1044E-04 OSCILLATION LIMIT = .8239
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.82 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3090E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 20 COMPLETED. CUM ITER = 137
 *** TIME = .110452E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1209E-04 OSCILLATION LIMIT = .9538
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4736E-01
 HT FLOW CONVERGENCE VALUE= .3283E-01 CRITERION= .3870 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 21 COMPLETED. CUM ITER = 138
 *** TIME = .111241E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1020E-04 OSCILLATION LIMIT = .8049
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.82 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3092E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 22 COMPLETED. CUM ITER = 139
 *** TIME = .112030E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1178E-04 OSCILLATION LIMIT = .9296
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4728E-01
 HT FLOW CONVERGENCE VALUE= .3279E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 23 COMPLETED. CUM ITER = 140
 *** TIME = .112819E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9974E-05 OSCILLATION LIMIT = .7869
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.82 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3094E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 24 COMPLETED. CUM ITER = 141
 *** TIME = .113608E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1149E-04 OSCILLATION LIMIT = .9067
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4721E-01
 HT FLOW CONVERGENCE VALUE= .3276E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 25 COMPLETED. CUM ITER = 142
 *** TIME = .114397E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9755E-05 OSCILLATION LIMIT = .7696
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.83 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3096E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 26 COMPLETED. CUM ITER = 143
 *** TIME = .115186E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1122E-04 OSCILLATION LIMIT = .8849
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4713E-01
 HT FLOW CONVERGENCE VALUE= .3272E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 27 COMPLETED. CUM ITER = 144
 *** TIME = .115974E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9547E-05 OSCILLATION LIMIT = .7532

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.83 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3098E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 28 COMPLETED. CUM ITER = 145
 *** TIME = .116763E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1095E-04 OSCILLATION LIMIT = .8641
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4706E-01
 HT FLOW CONVERGENCE VALUE= .3268E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 29 COMPLETED. CUM ITER = 146
 *** TIME = .117552E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9348E-05 OSCILLATION LIMIT = .7375
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.84 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3100E-01 CRITERION= .3862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 30 COMPLETED. CUM ITER = 147
 *** TIME = .118341E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1070E-04 OSCILLATION LIMIT = .8444
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.30 CRITERION= .3866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4699E-01
 HT FLOW CONVERGENCE VALUE= .3264E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 31 COMPLETED. CUM ITER = 148
 *** TIME = .119130E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9160E-05 OSCILLATION LIMIT = .7227
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.84 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3100E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 32 COMPLETED. CUM ITER = 149
 *** TIME = .119919E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1047E-04 OSCILLATION LIMIT = .8257
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3865
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4693E-01
 HT FLOW CONVERGENCE VALUE= .3262E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 33 COMPLETED. CUM ITER = 150
 *** TIME = .120708E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8980E-05 OSCILLATION LIMIT = .7085
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.84 CRITERION= .3868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3102E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 34 COMPLETED. CUM ITER = 151
 *** TIME = .121497E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1024E-04 OSCILLATION LIMIT = .8079
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3864
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4686E-01
 HT FLOW CONVERGENCE VALUE= .3287E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 35 COMPLETED. CUM ITER = 152

*** TIME = .122286E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8810E-05 OSCILLATION LIMIT = .6950
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.85 CRITERION= .3867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3166E-01 CRITERION= .3859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 36 COMPLETED. CUM ITER = 153
 *** TIME = .123075E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1003E-04 OSCILLATION LIMIT = .7911
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3863
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4680E-01
 HT FLOW CONVERGENCE VALUE= .3368E-01 CRITERION= .3862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 37 COMPLETED. CUM ITER = 154
 *** TIME = .123864E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8654E-05 OSCILLATION LIMIT = .6827
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.85 CRITERION= .3866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3229E-01 CRITERION= .3858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 38 COMPLETED. CUM ITER = 155
 *** TIME = .124653E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9831E-05 OSCILLATION LIMIT = .7756
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4673E-01
 HT FLOW CONVERGENCE VALUE= .3385E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 39 COMPLETED. CUM ITER = 156
 *** TIME = .125442E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8508E-05 OSCILLATION LIMIT = .6712
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.86 CRITERION= .3865
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4483E-01
 HT FLOW CONVERGENCE VALUE= .3230E-01 CRITERION= .3857 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 40 COMPLETED. CUM ITER = 157
 *** TIME = .126231E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9639E-05 OSCILLATION LIMIT = .7605

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 12:36:13 JUN 19, 1995 CP= 8317.560
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3860
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3650E-01
 HT FLOW CONVERGENCE VALUE= .2628E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 158
 *** TIME = .127020E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1105E-04 OSCILLATION LIMIT = .8722
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.90 CRITERION= .3862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2371E-01 CRITERION= .3857 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 159
*** TIME = .127809E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1784E-04 OSCILLATION LIMIT = 1.407
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3859
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3638E-01
HT FLOW CONVERGENCE VALUE= .2582E-01 CRITERION= .3859 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 160
*** TIME = .128598E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1260E-04 OSCILLATION LIMIT = .9939
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.91 CRITERION= .3861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
HT FLOW CONVERGENCE VALUE= .2406E-01 CRITERION= .3856 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 161
*** TIME = .129386E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1531E-04 OSCILLATION LIMIT = 1.208
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3858
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3631E-01
HT FLOW CONVERGENCE VALUE= .2572E-01 CRITERION= .3858 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 162
*** TIME = .130175E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1267E-04 OSCILLATION LIMIT = .9996
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.91 CRITERION= .3861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
HT FLOW CONVERGENCE VALUE= .2409E-01 CRITERION= .3855 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 163
*** TIME = .130964E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1493E-04 OSCILLATION LIMIT = 1.178
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3857
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3625E-01
HT FLOW CONVERGENCE VALUE= .2568E-01 CRITERION= .3857 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 164
*** TIME = .131753E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1244E-04 OSCILLATION LIMIT = .9813
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.91 CRITERION= .3860
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
HT FLOW CONVERGENCE VALUE= .2412E-01 CRITERION= .3854 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 165
*** TIME = .132542E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1459E-04 OSCILLATION LIMIT = 1.151
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3856
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3620E-01
HT FLOW CONVERGENCE VALUE= .2564E-01 CRITERION= .3857 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 166
*** TIME = .133331E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1222E-04 OSCILLATION LIMIT = .9643
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.92 CRITERION= .3859

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2414E-01 CRITERION= .3853 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 167
 *** TIME = .134120E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1427E-04 OSCILLATION LIMIT = 1.126
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3614E-01
 HT FLOW CONVERGENCE VALUE= .2560E-01 CRITERION= .3856 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 168
 *** TIME = .134909E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1201E-04 OSCILLATION LIMIT = .9477
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.92 CRITERION= .3858
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2418E-01 CRITERION= .3852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 169
 *** TIME = .135698E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1397E-04 OSCILLATION LIMIT = 1.102
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3608E-01
 HT FLOW CONVERGENCE VALUE= .2561E-01 CRITERION= .3855 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 170
 *** TIME = .136487E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1181E-04 OSCILLATION LIMIT = .9319
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.92 CRITERION= .3857
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2419E-01 CRITERION= .3851 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 171
 *** TIME = .137276E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1369E-04 OSCILLATION LIMIT = 1.080
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3854
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3603E-01
 HT FLOW CONVERGENCE VALUE= .2563E-01 CRITERION= .3854 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 172
 *** TIME = .138065E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1162E-04 OSCILLATION LIMIT = .9169
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.92 CRITERION= .3856
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2428E-01 CRITERION= .3850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 173
 *** TIME = .138854E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1343E-04 OSCILLATION LIMIT = 1.059
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3853
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3598E-01
 HT FLOW CONVERGENCE VALUE= .2561E-01 CRITERION= .3853 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 174
 *** TIME = .139643E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1143E-04 OSCILLATION LIMIT = .9018
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.93 CRITERION= .3855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2429E-01 CRITERION= .3850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 18 COMPLETED. CUM ITER = 175
 *** TIME = .140432E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1318E-04 OSCILLATION LIMIT = 1.040
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3593E-01
 HT FLOW CONVERGENCE VALUE= .2558E-01 CRITERION= .3852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 19 COMPLETED. CUM ITER = 176
 *** TIME = .141221E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = .8877
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.93 CRITERION= .3854
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2430E-01 CRITERION= .3849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 20 COMPLETED. CUM ITER = 177
 *** TIME = .142010E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1294E-04 OSCILLATION LIMIT = 1.021
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3589E-01
 HT FLOW CONVERGENCE VALUE= .2555E-01 CRITERION= .3851 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 21 COMPLETED. CUM ITER = 178
 *** TIME = .142798E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1108E-04 OSCILLATION LIMIT = .8741
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.93 CRITERION= .3853
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2432E-01 CRITERION= .3848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 22 COMPLETED. CUM ITER = 179
 *** TIME = .143587E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1271E-04 OSCILLATION LIMIT = 1.003
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3584E-01
 HT FLOW CONVERGENCE VALUE= .2552E-01 CRITERION= .3850 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 23 COMPLETED. CUM ITER = 180
 *** TIME = .144376E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1092E-04 OSCILLATION LIMIT = .8612
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.93 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2433E-01 CRITERION= .3847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 24 COMPLETED. CUM ITER = 181
 *** TIME = .145165E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1249E-04 OSCILLATION LIMIT = .9855
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3580E-01
 HT FLOW CONVERGENCE VALUE= .2550E-01 CRITERION= .3849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 25 COMPLETED. CUM ITER = 182
 *** TIME = .145954E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1076E-04 OSCILLATION LIMIT = .8488
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.94 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2448E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 26 COMPLETED. CUM ITER = 183
 *** TIME = .146743E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = .9691
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3575E-01
 HT FLOW CONVERGENCE VALUE= .2597E-01 CRITERION= .3848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 27 COMPLETED. CUM ITER = 184
 *** TIME = .147532E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1061E-04 OSCILLATION LIMIT = .8371
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.94 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2481E-01 CRITERION= .3845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 28 COMPLETED. CUM ITER = 185
 *** TIME = .148321E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1209E-04 OSCILLATION LIMIT = .9540
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3571E-01
 HT FLOW CONVERGENCE VALUE= .2594E-01 CRITERION= .3847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 29 COMPLETED. CUM ITER = 186
 *** TIME = .149110E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = .8266
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.94 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2482E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 30 COMPLETED. CUM ITER = 187
 *** TIME = .149899E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1190E-04 OSCILLATION LIMIT = .9392
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3567E-01
 HT FLOW CONVERGENCE VALUE= .2592E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 31 COMPLETED. CUM ITER = 188
 *** TIME = .150688E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1034E-04 OSCILLATION LIMIT = .8157
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.94 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
 HT FLOW CONVERGENCE VALUE= .2483E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 32 COMPLETED. CUM ITER = 189
 *** TIME = .151477E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1172E-04 OSCILLATION LIMIT = .9249
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3564E-01
 HT FLOW CONVERGENCE VALUE= .2590E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP      8  SUBSTEP    33 COMPLETED.    CUM ITER =   190
*** TIME = .152266E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1021E-04    OSCILLATION LIMIT = .8054
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.95    CRITERION= .3848
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
    HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .3843    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    34 COMPLETED.    CUM ITER =   191
*** TIME = .153055E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1155E-04    OSCILLATION LIMIT = .9113
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.37    CRITERION= .3845
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3560E-01
    HT FLOW CONVERGENCE VALUE= .2587E-01 CRITERION= .3845    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    35 COMPLETED.    CUM ITER =   192
*** TIME = .153844E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1008E-04    OSCILLATION LIMIT = .7955
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.95    CRITERION= .3847
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
    HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .3842    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    36 COMPLETED.    CUM ITER =   193
*** TIME = .154633E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1138E-04    OSCILLATION LIMIT = .8982
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.37    CRITERION= .3844
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3557E-01
    HT FLOW CONVERGENCE VALUE= .2585E-01 CRITERION= .3844    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    37 COMPLETED.    CUM ITER =   194
*** TIME = .155421E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9964E-05    OSCILLATION LIMIT = .7861
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.95    CRITERION= .3846
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
    HT FLOW CONVERGENCE VALUE= .2485E-01 CRITERION= .3841    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    38 COMPLETED.    CUM ITER =   195
*** TIME = .156210E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1123E-04    OSCILLATION LIMIT = .8857
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.37    CRITERION= .3843
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3554E-01
    HT FLOW CONVERGENCE VALUE= .2583E-01 CRITERION= .3843    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    39 COMPLETED.    CUM ITER =   196
*** TIME = .156999E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9850E-05    OSCILLATION LIMIT = .7771
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.95    CRITERION= .3845
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3447E-01
    HT FLOW CONVERGENCE VALUE= .2486E-01 CRITERION= .3840    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    40 COMPLETED.    CUM ITER =   197
*** TIME = .157788E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1108E-04    OSCILLATION LIMIT = .8738

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***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:14:37 JUN 19, 1995 CP= 10532.280
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2878E-01
 HT FLOW CONVERGENCE VALUE= .2075E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 198
 *** TIME = .158577E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1222E-04 OSCILLATION LIMIT = .9642
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.34 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1913E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 199
 *** TIME = .159366E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1880E-04 OSCILLATION LIMIT = 1.483
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2873E-01
 HT FLOW CONVERGENCE VALUE= .2046E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 200
 *** TIME = .160155E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1388E-04 OSCILLATION LIMIT = 1.095
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.34 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1932E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 201
 *** TIME = .160944E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1655E-04 OSCILLATION LIMIT = 1.306
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2870E-01
 HT FLOW CONVERGENCE VALUE= .2013E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 202
 *** TIME = .161733E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1403E-04 OSCILLATION LIMIT = 1.107
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.35 CRITERION= .3842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1915E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 203
 *** TIME = .162522E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1627E-04 OSCILLATION LIMIT = 1.284
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3839
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2867E-01
 HT FLOW CONVERGENCE VALUE= .2013E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 204
 *** TIME = .163311E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1388E-04 OSCILLATION LIMIT = 1.095
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.35 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1916E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 205
 *** TIME = .164100E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1603E-04 OSCILLATION LIMIT = 1.264
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2864E-01
 HT FLOW CONVERGENCE VALUE= .2010E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 206
 *** TIME = .164889E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1374E-04 OSCILLATION LIMIT = 1.084
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.35 CRITERION= .3840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1918E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 207
 *** TIME = .165678E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1579E-04 OSCILLATION LIMIT = 1.246
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2861E-01
 HT FLOW CONVERGENCE VALUE= .2008E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 208
 *** TIME = .166467E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 1.073
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.35 CRITERION= .3839
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1919E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 209
 *** TIME = .167256E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1557E-04 OSCILLATION LIMIT = 1.228
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2859E-01
 HT FLOW CONVERGENCE VALUE= .2006E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 210
 *** TIME = .168045E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1346E-04 OSCILLATION LIMIT = 1.062
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.35 CRITERION= .3838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1920E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 211
 *** TIME = .168833E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1536E-04 OSCILLATION LIMIT = 1.212
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2857E-01
 HT FLOW CONVERGENCE VALUE= .2004E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 212
 *** TIME = .169622E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1333E-04 OSCILLATION LIMIT = 1.051

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.36 CRITERION= .3837
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1921E-01 CRITERION= .3833 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 213

*** TIME = .170411E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1517E-04 OSCILLATION LIMIT = 1.197

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3835
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2855E-01
HT FLOW CONVERGENCE VALUE= .2002E-01 CRITERION= .3835 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 214

*** TIME = .171200E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1320E-04 OSCILLATION LIMIT = 1.041

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.36 CRITERION= .3836
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1921E-01 CRITERION= .3832 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 215

*** TIME = .171989E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1498E-04 OSCILLATION LIMIT = 1.182

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3834
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2853E-01
HT FLOW CONVERGENCE VALUE= .2000E-01 CRITERION= .3834 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 216

*** TIME = .172778E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1308E-04 OSCILLATION LIMIT = 1.032

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.36 CRITERION= .3835
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1922E-01 CRITERION= .3831 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 217

*** TIME = .173567E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1480E-04 OSCILLATION LIMIT = 1.168

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3833
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2851E-01
HT FLOW CONVERGENCE VALUE= .1999E-01 CRITERION= .3833 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 218

*** TIME = .174356E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1296E-04 OSCILLATION LIMIT = 1.022

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.36 CRITERION= .3835
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1923E-01 CRITERION= .3831 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 219

*** TIME = .175145E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1463E-04 OSCILLATION LIMIT = 1.155

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3832
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2849E-01
HT FLOW CONVERGENCE VALUE= .1997E-01 CRITERION= .3832 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 9 SUBSTEP 23 COMPLETED. CUM ITER = 220

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*** TIME = .175934E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1284E-04    OSCILLATION LIMIT = 1.013
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.36    CRITERION= .3834
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1924E-01    CRITERION= .3830    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 24 COMPLETED. CUM ITER = 221
*** TIME = .176723E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1447E-04    OSCILLATION LIMIT = 1.142
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76    CRITERION= .3831
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2847E-01
HT FLOW CONVERGENCE VALUE= .1995E-01    CRITERION= .3831    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 25 COMPLETED. CUM ITER = 222
*** TIME = .177512E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1273E-04    OSCILLATION LIMIT = 1.005
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37    CRITERION= .3833
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1924E-01    CRITERION= .3829    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 26 COMPLETED. CUM ITER = 223
*** TIME = .178301E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1432E-04    OSCILLATION LIMIT = 1.129
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76    CRITERION= .3830
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2846E-01
HT FLOW CONVERGENCE VALUE= .1994E-01    CRITERION= .3831    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 27 COMPLETED. CUM ITER = 224
*** TIME = .179090E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1263E-04    OSCILLATION LIMIT = .9965
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37    CRITERION= .3832
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1925E-01    CRITERION= .3828    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 28 COMPLETED. CUM ITER = 225
*** TIME = .179879E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1417E-04    OSCILLATION LIMIT = 1.118
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76    CRITERION= .3830
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2844E-01
HT FLOW CONVERGENCE VALUE= .1992E-01    CRITERION= .3830    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 29 COMPLETED. CUM ITER = 226
*** TIME = .180668E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1253E-04    OSCILLATION LIMIT = .9886
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37    CRITERION= .3831
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1925E-01    CRITERION= .3827    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 30 COMPLETED. CUM ITER = 227
*** TIME = .181457E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1402E-04    OSCILLATION LIMIT = 1.106
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76    CRITERION= .3829
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2842E-01
HT FLOW CONVERGENCE VALUE= .1991E-01    CRITERION= .3829    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 31 COMPLETED. CUM ITER = 228
*** TIME = .182245E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1243E-04 OSCILLATION LIMIT = .9810
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3830
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1926E-01 CRITERION= .3826 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 32 COMPLETED. CUM ITER = 229
*** TIME = .183034E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1388E-04 OSCILLATION LIMIT = 1.095
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3828
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2841E-01
HT FLOW CONVERGENCE VALUE= .1989E-01 CRITERION= .3828 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 33 COMPLETED. CUM ITER = 230
*** TIME = .183823E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1234E-04 OSCILLATION LIMIT = .9738
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3829
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1926E-01 CRITERION= .3826 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 34 COMPLETED. CUM ITER = 231
*** TIME = .184612E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1375E-04 OSCILLATION LIMIT = 1.085
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3827
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2839E-01
HT FLOW CONVERGENCE VALUE= .1988E-01 CRITERION= .3827 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 35 COMPLETED. CUM ITER = 232
*** TIME = .185401E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = .9668
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3828
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1927E-01 CRITERION= .3825 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 36 COMPLETED. CUM ITER = 233
*** TIME = .186190E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1363E-04 OSCILLATION LIMIT = 1.075
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3826
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2838E-01
HT FLOW CONVERGENCE VALUE= .1986E-01 CRITERION= .3826 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 37 COMPLETED. CUM ITER = 234
*** TIME = .186979E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1217E-04 OSCILLATION LIMIT = .9601
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3828
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
HT FLOW CONVERGENCE VALUE= .1927E-01 CRITERION= .3824 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 38 COMPLETED. CUM ITER = 235
*** TIME = .187768E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 1.065
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.76 CRITERION= .3825

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2836E-01
 HT FLOW CONVERGENCE VALUE= .1985E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 39 COMPLETED. CUM ITER = 236
 *** TIME = .188557E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1209E-04 OSCILLATION LIMIT = .9537
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1928E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 40 COMPLETED. CUM ITER = 237
 *** TIME = .189346E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1339E-04 OSCILLATION LIMIT = 1.056

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 13:54:55 JUN 19, 1995 CP= 12767.320
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.062 CRITERION= .3824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2393E-01
 HT FLOW CONVERGENCE VALUE= .1664E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 1 COMPLETED. CUM ITER = 238
 *** TIME = .190135E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1423E-04 OSCILLATION LIMIT = 1.123
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.681 CRITERION= .3825
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1568E-01 CRITERION= .3822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 2 COMPLETED. CUM ITER = 239
 *** TIME = .190924E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1995E-04 OSCILLATION LIMIT = 1.574
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.062 CRITERION= .3823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2390E-01
 HT FLOW CONVERGENCE VALUE= .1647E-01 CRITERION= .3824 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 3 COMPLETED. CUM ITER = 240
 *** TIME = .191713E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1572E-04 OSCILLATION LIMIT = 1.241
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.682 CRITERION= .3825
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 4 COMPLETED. CUM ITER = 241
 *** TIME = .192502E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1816E-04 OSCILLATION LIMIT = 1.433
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.062 CRITERION= .3822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2389E-01
 HT FLOW CONVERGENCE VALUE= .1643E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 5 COMPLETED. CUM ITER = 242
 *** TIME = .193291E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1589E-04 OSCILLATION LIMIT = 1.254
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.684 CRITERION= .3824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1582E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 243
 *** TIME = .194080E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1796E-04 OSCILLATION LIMIT = 1.417
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.062 CRITERION= .3822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2387E-01
 HT FLOW CONVERGENCE VALUE= .1641E-01 CRITERION= .3822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 244
 *** TIME = .194868E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1579E-04 OSCILLATION LIMIT = 1.246
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.685 CRITERION= .3823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1583E-01 CRITERION= .3820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 245
 *** TIME = .195657E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1778E-04 OSCILLATION LIMIT = 1.402
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2386E-01
 HT FLOW CONVERGENCE VALUE= .1640E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 246
 *** TIME = .196446E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1570E-04 OSCILLATION LIMIT = 1.239
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.686 CRITERION= .3822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .3819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 10 COMPLETED. CUM ITER = 247
 *** TIME = .197235E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1761E-04 OSCILLATION LIMIT = 1.389
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2385E-01
 HT FLOW CONVERGENCE VALUE= .1638E-01 CRITERION= .3820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 11 COMPLETED. CUM ITER = 248
 *** TIME = .198024E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1561E-04 OSCILLATION LIMIT = 1.232
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.688 CRITERION= .3821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 12 COMPLETED. CUM ITER = 249
 *** TIME = .198813E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1745E-04 OSCILLATION LIMIT = 1.377
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3819
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2383E-01
 HT FLOW CONVERGENCE VALUE= .1637E-01 CRITERION= .3819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 13 COMPLETED. CUM ITER = 250
 *** TIME = .199602E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1553E-04 OSCILLATION LIMIT = 1.225
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.689 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .3817 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 14 COMPLETED. CUM ITER = 251
 *** TIME = .200391E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1731E-04 OSCILLATION LIMIT = 1.365
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2382E-01
 HT FLOW CONVERGENCE VALUE= .1635E-01 CRITERION= .3819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 15 COMPLETED. CUM ITER = 252
 *** TIME = .201180E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1544E-04 OSCILLATION LIMIT = 1.218
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.691 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 16 COMPLETED. CUM ITER = 253
 *** TIME = .201969E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1717E-04 OSCILLATION LIMIT = 1.354
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2381E-01
 HT FLOW CONVERGENCE VALUE= .1635E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 17 COMPLETED. CUM ITER = 254
 *** TIME = .202758E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1535E-04 OSCILLATION LIMIT = 1.211
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.692 CRITERION= .3819
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1586E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 18 COMPLETED. CUM ITER = 255
 *** TIME = .203547E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1703E-04 OSCILLATION LIMIT = 1.343
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2379E-01
 HT FLOW CONVERGENCE VALUE= .1633E-01 CRITERION= .3817 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 256
 *** TIME = .204336E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1527E-04 OSCILLATION LIMIT = 1.205
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.693 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1586E-01 CRITERION= .3815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 257
 *** TIME = .205125E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1690E-04 OSCILLATION LIMIT = 1.333
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2378E-01
 HT FLOW CONVERGENCE VALUE= .1632E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 258
*** TIME = .205914E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1519E-04 OSCILLATION LIMIT = 1.199
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.695 CRITERION= .3817
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .3814 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 259
*** TIME = .206703E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1678E-04 OSCILLATION LIMIT = 1.323
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3815
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2377E-01
HT FLOW CONVERGENCE VALUE= .1631E-01 CRITERION= .3815 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 260
*** TIME = .207492E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1512E-04 OSCILLATION LIMIT = 1.193
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.696 CRITERION= .3816
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .3813 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 261
*** TIME = .208280E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1666E-04 OSCILLATION LIMIT = 1.314
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2376E-01
HT FLOW CONVERGENCE VALUE= .1630E-01 CRITERION= .3814 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 25 COMPLETED. CUM ITER = 262
*** TIME = .209069E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1505E-04 OSCILLATION LIMIT = 1.187
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.697 CRITERION= .3815
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .3812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 26 COMPLETED. CUM ITER = 263
*** TIME = .209858E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1654E-04 OSCILLATION LIMIT = 1.305
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3813
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2375E-01
HT FLOW CONVERGENCE VALUE= .1629E-01 CRITERION= .3814 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 27 COMPLETED. CUM ITER = 264
*** TIME = .210647E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1497E-04 OSCILLATION LIMIT = 1.181
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.699 CRITERION= .3815
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1588E-01 CRITERION= .3811 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 28 COMPLETED. CUM ITER = 265
*** TIME = .211436E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1643E-04 OSCILLATION LIMIT = 1.296
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3812
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2374E-01

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HT FLOW CONVERGENCE VALUE= .1628E-01 CRITERION= .3813 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 29 COMPLETED. CUM ITER = 266
*** TIME = .212225E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1491E-04 OSCILLATION LIMIT = 1.176
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.700 CRITERION= .3814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1588E-01 CRITERION= .3811 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 30 COMPLETED. CUM ITER = 267
*** TIME = .213014E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1633E-04 OSCILLATION LIMIT = 1.288
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3812
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2373E-01
HT FLOW CONVERGENCE VALUE= .1627E-01 CRITERION= .3812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 31 COMPLETED. CUM ITER = 268
*** TIME = .213803E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1484E-04 OSCILLATION LIMIT = 1.171
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.701 CRITERION= .3813
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1588E-01 CRITERION= .3810 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 32 COMPLETED. CUM ITER = 269
*** TIME = .214592E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1622E-04 OSCILLATION LIMIT = 1.280
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3811
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2372E-01
HT FLOW CONVERGENCE VALUE= .1626E-01 CRITERION= .3811 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 33 COMPLETED. CUM ITER = 270
*** TIME = .215381E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1478E-04 OSCILLATION LIMIT = 1.166
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.703 CRITERION= .3812
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1588E-01 CRITERION= .3809 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 34 COMPLETED. CUM ITER = 271
*** TIME = .216170E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1612E-04 OSCILLATION LIMIT = 1.272
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3810
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2371E-01
HT FLOW CONVERGENCE VALUE= .1625E-01 CRITERION= .3810 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 35 COMPLETED. CUM ITER = 272
*** TIME = .216959E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1472E-04 OSCILLATION LIMIT = 1.161
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.704 CRITERION= .3811
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
HT FLOW CONVERGENCE VALUE= .1588E-01 CRITERION= .3808 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 36 COMPLETED. CUM ITER = 273
*** TIME = .217748E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1603E-04 OSCILLATION LIMIT = 1.265
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3809
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2370E-01
 HT FLOW CONVERGENCE VALUE= .1624E-01 CRITERION= .3809 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 37 COMPLETED. CUM ITER = 274
 *** TIME = .218537E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1466E-04 OSCILLATION LIMIT = 1.157
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.705 CRITERION= .3810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .3807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 38 COMPLETED. CUM ITER = 275
 *** TIME = .219326E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1594E-04 OSCILLATION LIMIT = 1.257
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.061 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2369E-01
 HT FLOW CONVERGENCE VALUE= .1623E-01 CRITERION= .3808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 39 COMPLETED. CUM ITER = 276
 *** TIME = .220115E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1461E-04 OSCILLATION LIMIT = 1.152
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 8.707 CRITERION= .3809
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2324E-01
 HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .3806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 40 COMPLETED. CUM ITER = 277
 *** TIME = .220904E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1585E-04 OSCILLATION LIMIT = 1.250

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:33:48 JUN 19, 1995 CP= 14981.520
 FOR SUPPORT CALL ROBERT BAHNEY. PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10. yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 7.794 CRITERION= .3807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2042E-01
 HT FLOW CONVERGENCE VALUE= .1385E-01 CRITERION= .3808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 278
 *** TIME = .221692E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1705E-04 OSCILLATION LIMIT = 1.345
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.439 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1324E-01 CRITERION= .3806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 279
 *** TIME = .222481E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2259E-04 OSCILLATION LIMIT = 1.782
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.794 CRITERION= .3806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2041E-01
 HT FLOW CONVERGENCE VALUE= .1374E-01 CRITERION= .3807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 280
 *** TIME = .223270E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1863E-04 OSCILLATION LIMIT = 1.470

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.440 CRITERION= .3808
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1333E-01 CRITERION= .3805 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 281

*** TIME = .224059E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .2091E-04 OSCILLATION LIMIT = 1.650

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.794 CRITERION= .3806
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2040E-01
HT FLOW CONVERGENCE VALUE= .1371E-01 CRITERION= .3806 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 282

*** TIME = .224848E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1884E-04 OSCILLATION LIMIT = 1.486

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.441 CRITERION= .3807
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1333E-01 CRITERION= .3804 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 283

*** TIME = .225637E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .2076E-04 OSCILLATION LIMIT = 1.637

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.794 CRITERION= .3805
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2039E-01
HT FLOW CONVERGENCE VALUE= .1369E-01 CRITERION= .3805 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 284

*** TIME = .226426E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1878E-04 OSCILLATION LIMIT = 1.481

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.442 CRITERION= .3806
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1334E-01 CRITERION= .3803 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 285

*** TIME = .227215E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .2062E-04 OSCILLATION LIMIT = 1.627

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.794 CRITERION= .3804
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2038E-01
HT FLOW CONVERGENCE VALUE= .1368E-01 CRITERION= .3804 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 286

*** TIME = .228004E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .1872E-04 OSCILLATION LIMIT = 1.477

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.444 CRITERION= .3805
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1334E-01 CRITERION= .3802 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 287

*** TIME = .228793E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .2049E-04 OSCILLATION LIMIT = 1.617

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3803
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2037E-01
HT FLOW CONVERGENCE VALUE= .1367E-01 CRITERION= .3804 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 288

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*** TIME = .229582E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1866E-04 OSCILLATION LIMIT = 1.472
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.445 CRITERION= .3804
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1334E-01 CRITERION= .3802 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 289
*** TIME = .230371E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2037E-04 OSCILLATION LIMIT = 1.607
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2036E-01
HT FLOW CONVERGENCE VALUE= .1366E-01 CRITERION= .3803 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 290
*** TIME = .231160E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1860E-04 OSCILLATION LIMIT = 1.468
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.446 CRITERION= .3803
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .3801 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 291
*** TIME = .231949E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2026E-04 OSCILLATION LIMIT = 1.598
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2036E-01
HT FLOW CONVERGENCE VALUE= .1365E-01 CRITERION= .3802 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 292
*** TIME = .232738E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1855E-04 OSCILLATION LIMIT = 1.463
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.447 CRITERION= .3803
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .3800 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 293
*** TIME = .233527E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2015E-04 OSCILLATION LIMIT = 1.590
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3801
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2035E-01
HT FLOW CONVERGENCE VALUE= .1364E-01 CRITERION= .3801 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 294
*** TIME = .234315E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1849E-04 OSCILLATION LIMIT = 1.459
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.448 CRITERION= .3802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .3799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 295
*** TIME = .235104E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2005E-04 OSCILLATION LIMIT = 1.582
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3800
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2035E-01
HT FLOW CONVERGENCE VALUE= .1363E-01 CRITERION= .3800 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 296
*** TIME = .235893E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1843E-04 OSCILLATION LIMIT = 1.454
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.449 CRITERION= .3801
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .3798 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 297
*** TIME = .236682E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1995E-04 OSCILLATION LIMIT = 1.574
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3799
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2034E-01
HT FLOW CONVERGENCE VALUE= .1363E-01 CRITERION= .3799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 298
*** TIME = .237471E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1838E-04 OSCILLATION LIMIT = 1.450
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.450 CRITERION= .3800
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1336E-01 CRITERION= .3798 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 299
*** TIME = .238260E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1986E-04 OSCILLATION LIMIT = 1.567
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3798
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2034E-01
HT FLOW CONVERGENCE VALUE= .1362E-01 CRITERION= .3799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 300
*** TIME = .239049E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1833E-04 OSCILLATION LIMIT = 1.446
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.451 CRITERION= .3799
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .3797 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 301
*** TIME = .239838E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1976E-04 OSCILLATION LIMIT = 1.559
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3798
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2033E-01
HT FLOW CONVERGENCE VALUE= .1361E-01 CRITERION= .3798 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 302
*** TIME = .240627E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1828E-04 OSCILLATION LIMIT = 1.442
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.452 CRITERION= .3799
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
HT FLOW CONVERGENCE VALUE= .1336E-01 CRITERION= .3796 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 303
*** TIME = .241416E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1968E-04 OSCILLATION LIMIT = 1.552
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3797

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2033E-01
 HT FLOW CONVERGENCE VALUE= .1360E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 304
 *** TIME = .242205E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1823E-04 OSCILLATION LIMIT = 1.438
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.453 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1317E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 305
 *** TIME = .242994E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 1.546
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2033E-01
 HT FLOW CONVERGENCE VALUE= .1321E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 29 COMPLETED. CUM ITER = 306
 *** TIME = .243783E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1818E-04 OSCILLATION LIMIT = 1.435
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.454 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 30 COMPLETED. CUM ITER = 307
 *** TIME = .244572E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1951E-04 OSCILLATION LIMIT = 1.540
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2032E-01
 HT FLOW CONVERGENCE VALUE= .1302E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 31 COMPLETED. CUM ITER = 308
 *** TIME = .245361E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1815E-04 OSCILLATION LIMIT = 1.432
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.455 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 32 COMPLETED. CUM ITER = 309
 *** TIME = .246150E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1944E-04 OSCILLATION LIMIT = 1.534
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.793 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2032E-01
 HT FLOW CONVERGENCE VALUE= .1301E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 33 COMPLETED. CUM ITER = 310
 *** TIME = .246939E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1811E-04 OSCILLATION LIMIT = 1.429
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.456 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 34 COMPLETED. CUM ITER = 311
 *** TIME = .247727E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1936E-04 OSCILLATION LIMIT = 1.528
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.792 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2031E-01
 HT FLOW CONVERGENCE VALUE= .1301E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 35 COMPLETED. CUM ITER = 312
 *** TIME = .248516E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1806E-04 OSCILLATION LIMIT = 1.425
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.457 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 36 COMPLETED. CUM ITER = 313
 *** TIME = .249305E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1929E-04 OSCILLATION LIMIT = 1.522
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.792 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2031E-01
 HT FLOW CONVERGENCE VALUE= .1300E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 37 COMPLETED. CUM ITER = 314
 *** TIME = .250094E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1802E-04 OSCILLATION LIMIT = 1.422
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.458 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 38 COMPLETED. CUM ITER = 315
 *** TIME = .250883E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1921E-04 OSCILLATION LIMIT = 1.516
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.792 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2031E-01
 HT FLOW CONVERGENCE VALUE= .1299E-01 CRITERION= .3792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 39 COMPLETED. CUM ITER = 316
 *** TIME = .251672E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1798E-04 OSCILLATION LIMIT = 1.419
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 7.459 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1996E-01
 HT FLOW CONVERGENCE VALUE= .1283E-01 CRITERION= .3790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 40 COMPLETED. CUM ITER = 317
 *** TIME = .252461E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1914E-04 OSCILLATION LIMIT = 1.510

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 19, 1995 CP= 17201.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 6.787 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1768E-01
 HT FLOW CONVERGENCE VALUE= .1120E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 1 COMPLETED. CUM ITER = 318
 *** TIME = .253250E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .2093E-04 OSCILLATION LIMIT = 1.651
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.453 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1084E-01 CRITERION= .3790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 2 COMPLETED. CUM ITER = 319
 *** TIME = .254039E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2637E-04 OSCILLATION LIMIT = 2.080
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.787 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1767E-01
 HT FLOW CONVERGENCE VALUE= .1112E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 3 COMPLETED. CUM ITER = 320
 *** TIME = .254828E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2259E-04 OSCILLATION LIMIT = 1.782
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.454 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1090E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 4 COMPLETED. CUM ITER = 321
 *** TIME = .255617E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2473E-04 OSCILLATION LIMIT = 1.951
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.787 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1767E-01
 HT FLOW CONVERGENCE VALUE= .1110E-01 CRITERION= .3790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 322
 *** TIME = .256406E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2282E-04 OSCILLATION LIMIT = 1.800
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.455 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1090E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 323
 *** TIME = .257195E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 1.941
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1766E-01
 HT FLOW CONVERGENCE VALUE= .1109E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 324
 *** TIME = .257984E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2278E-04 OSCILLATION LIMIT = 1.797
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.456 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 325
 *** TIME = .258773E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 1.932
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1766E-01
 HT FLOW CONVERGENCE VALUE= .1108E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 326
 *** TIME = .259562E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2274E-04 OSCILLATION LIMIT = 1.794
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.457 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 327
 *** TIME = .260351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2438E-04 OSCILLATION LIMIT = 1.923
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1765E-01
 HT FLOW CONVERGENCE VALUE= .1108E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 328
 *** TIME = .261139E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2271E-04 OSCILLATION LIMIT = 1.791
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.458 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 329
 *** TIME = .261928E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2428E-04 OSCILLATION LIMIT = 1.916
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1765E-01
 HT FLOW CONVERGENCE VALUE= .1107E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 330
 *** TIME = .262717E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2266E-04 OSCILLATION LIMIT = 1.788
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.459 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 331
 *** TIME = .263506E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2419E-04 OSCILLATION LIMIT = 1.908
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1765E-01
 HT FLOW CONVERGENCE VALUE= .1106E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 332
 *** TIME = .264295E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2262E-04 OSCILLATION LIMIT = 1.785
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.460 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 333
 *** TIME = .265084E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2410E-04 OSCILLATION LIMIT = 1.902
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1764E-01

HT FLOW CONVERGENCE VALUE= .1105E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 334
 *** TIME = .265873E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2258E-04 OSCILLATION LIMIT = 1.781
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.461 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 335
 *** TIME = .266662E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2402E-04 OSCILLATION LIMIT = 1.895
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1764E-01
 HT FLOW CONVERGENCE VALUE= .1105E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 336
 *** TIME = .267451E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2254E-04 OSCILLATION LIMIT = 1.778
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.461 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 337
 *** TIME = .268240E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2394E-04 OSCILLATION LIMIT = 1.888
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.786 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1764E-01
 HT FLOW CONVERGENCE VALUE= .1104E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 21 COMPLETED. CUM ITER = 338
 *** TIME = .269029E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2250E-04 OSCILLATION LIMIT = 1.775
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.462 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 22 COMPLETED. CUM ITER = 339
 *** TIME = .269818E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2386E-04 OSCILLATION LIMIT = 1.882
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1763E-01
 HT FLOW CONVERGENCE VALUE= .1104E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 23 COMPLETED. CUM ITER = 340
 *** TIME = .270607E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2246E-04 OSCILLATION LIMIT = 1.772
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.463 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3781 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 24 COMPLETED. CUM ITER = 341
 *** TIME = .271396E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2378E-04 OSCILLATION LIMIT = 1.876
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1763E-01
 HT FLOW CONVERGENCE VALUE= .1103E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 25 COMPLETED. CUM ITER = 342
 *** TIME = .272185E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2242E-04 OSCILLATION LIMIT = 1.769
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.464 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3780 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 26 COMPLETED. CUM ITER = 343
 *** TIME = .272974E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2371E-04 OSCILLATION LIMIT = 1.870
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1763E-01
 HT FLOW CONVERGENCE VALUE= .1102E-01 CRITERION= .3781 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 27 COMPLETED. CUM ITER = 344
 *** TIME = .273762E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2238E-04 OSCILLATION LIMIT = 1.765
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.465 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 28 COMPLETED. CUM ITER = 345
 *** TIME = .274551E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2363E-04 OSCILLATION LIMIT = 1.865
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1762E-01
 HT FLOW CONVERGENCE VALUE= .1102E-01 CRITERION= .3780 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 29 COMPLETED. CUM ITER = 346
 *** TIME = .275340E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2234E-04 OSCILLATION LIMIT = 1.762
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.466 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 30 COMPLETED. CUM ITER = 347
 *** TIME = .276129E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2356E-04 OSCILLATION LIMIT = 1.859
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1762E-01
 HT FLOW CONVERGENCE VALUE= .1101E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 31 COMPLETED. CUM ITER = 348
 *** TIME = .276918E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2230E-04 OSCILLATION LIMIT = 1.760
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.467 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 32 COMPLETED. CUM ITER = 349
 *** TIME = .277707E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2349E-04 OSCILLATION LIMIT = 1.854

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1762E-01
 HT FLOW CONVERGENCE VALUE= .1101E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 33 COMPLETED. CUM ITER = 350
 *** TIME = .278496E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2227E-04 OSCILLATION LIMIT = 1.757
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.467 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 34 COMPLETED. CUM ITER = 351
 *** TIME = .279285E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2343E-04 OSCILLATION LIMIT = 1.848
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1762E-01
 HT FLOW CONVERGENCE VALUE= .1100E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 35 COMPLETED. CUM ITER = 352
 *** TIME = .280074E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2223E-04 OSCILLATION LIMIT = 1.754
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.468 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1091E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 36 COMPLETED. CUM ITER = 353
 *** TIME = .280863E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2336E-04 OSCILLATION LIMIT = 1.843
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1761E-01
 HT FLOW CONVERGENCE VALUE= .1100E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 37 COMPLETED. CUM ITER = 354
 *** TIME = .281652E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2220E-04 OSCILLATION LIMIT = 1.751
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.469 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1092E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 38 COMPLETED. CUM ITER = 355
 *** TIME = .282441E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2330E-04 OSCILLATION LIMIT = 1.838
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.785 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1761E-01
 HT FLOW CONVERGENCE VALUE= .1101E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 39 COMPLETED. CUM ITER = 356
 *** TIME = .283230E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2217E-04 OSCILLATION LIMIT = 1.749
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.470 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1732E-01
 HT FLOW CONVERGENCE VALUE= .1086E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 40 COMPLETED. CUM ITER = 357

*** TIME = .284019E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2324E-04 OSCILLATION LIMIT = 1.833
 Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM FROM .31558E+08 TO .28402E+09 BY .31558E+08

TIME= .31558E+08

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 6169.91289 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
 LOAD LABELS = TEMP
 VALUES = 107.47 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
 LOAD LABELS = TEMP
 VALUES = 108.60 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
 LOAD LABELS = TEMP
 VALUES = 111.24 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
 CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 19440.680 TIME= 16:00:00
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
 procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 16:00:00 JUN 19, 1995 CP= 19440.680
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
 TIME AT END OF THE LOAD STEP.31558E+08
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 10
 MAXIMUM NUMBER OF SUBSTEPS 40
 MINIMUM NUMBER OF SUBSTEPS 5
 START WITH TIME STEP FROM PREVIOUS SUBSTEP YES
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25

STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS
 THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 6.017 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1564E-01
 HT FLOW CONVERGENCE VALUE= .9596E-02 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 358
 *** TIME = .284808E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2547E-04 OSCILLATION LIMIT = 2.010
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.702 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9384E-02 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 359
 *** TIME = .285597E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3046E-04 OSCILLATION LIMIT = 2.403
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.017 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1563E-01
 HT FLOW CONVERGENCE VALUE= .9544E-02 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 360
 *** TIME = .286386E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2704E-04 OSCILLATION LIMIT = 2.134
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.703 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9428E-02 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 361
 *** TIME = .287174E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2898E-04 OSCILLATION LIMIT = 2.286
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.017 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1563E-01
 HT FLOW CONVERGENCE VALUE= .9531E-02 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 362
 *** TIME = .287963E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2727E-04 OSCILLATION LIMIT = 2.151
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.704 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9431E-02 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 363
 *** TIME = .288752E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2886E-04 OSCILLATION LIMIT = 2.277
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.017 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1563E-01

HT FLOW CONVERGENCE VALUE= .9524E-02 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 364
 *** TIME = .289541E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2724E-04 OSCILLATION LIMIT = 2.149
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.704 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9433E-02 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 8 COMPLETED. CUM ITER = 365
 *** TIME = .290330E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2876E-04 OSCILLATION LIMIT = 2.269
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.017 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1562E-01
 HT FLOW CONVERGENCE VALUE= .9519E-02 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 9 COMPLETED. CUM ITER = 366
 *** TIME = .291119E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2722E-04 OSCILLATION LIMIT = 2.147
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.705 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9436E-02 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 10 COMPLETED. CUM ITER = 367
 *** TIME = .291908E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2868E-04 OSCILLATION LIMIT = 2.262
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.016 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1562E-01
 HT FLOW CONVERGENCE VALUE= .9514E-02 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 11 COMPLETED. CUM ITER = 368
 *** TIME = .292697E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2719E-04 OSCILLATION LIMIT = 2.145
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9437E-02 CRITERION= .3770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 12 COMPLETED. CUM ITER = 369
 *** TIME = .293486E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2859E-04 OSCILLATION LIMIT = 2.256
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.016 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1562E-01
 HT FLOW CONVERGENCE VALUE= .9509E-02 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 13 COMPLETED. CUM ITER = 370
 *** TIME = .294275E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2715E-04 OSCILLATION LIMIT = 2.142
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9339E-02 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 14 COMPLETED. CUM ITER = 371
 *** TIME = .295064E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2851E-04 OSCILLATION LIMIT = 2.250
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 6.016      CRITERION= .3770
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1562E-01
HT FLOW CONVERGENCE VALUE= .9337E-02 CRITERION= .3770    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 15 COMPLETED. CUM ITER = 372
*** TIME = .295853E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2712E-04 OSCILLATION LIMIT = 2.140
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707      CRITERION= .3770
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
HT FLOW CONVERGENCE VALUE= .9278E-02 CRITERION= .3768    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 373
*** TIME = .296642E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2845E-04 OSCILLATION LIMIT = 2.244
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.016      CRITERION= .3769
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1561E-01
HT FLOW CONVERGENCE VALUE= .9332E-02 CRITERION= .3769    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 374
*** TIME = .297431E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2710E-04 OSCILLATION LIMIT = 2.138
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708      CRITERION= .3770
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
HT FLOW CONVERGENCE VALUE= .9278E-02 CRITERION= .3768    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 18 COMPLETED. CUM ITER = 375
*** TIME = .298220E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2838E-04 OSCILLATION LIMIT = 2.239
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.016      CRITERION= .3768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1561E-01
HT FLOW CONVERGENCE VALUE= .9328E-02 CRITERION= .3768    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 19 COMPLETED. CUM ITER = 376
*** TIME = .299009E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2706E-04 OSCILLATION LIMIT = 2.135
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709      CRITERION= .3769
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
HT FLOW CONVERGENCE VALUE= .9278E-02 CRITERION= .3767    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 20 COMPLETED. CUM ITER = 377
*** TIME = .299798E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2831E-04 OSCILLATION LIMIT = 2.233
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.016      CRITERION= .3767
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1561E-01
HT FLOW CONVERGENCE VALUE= .9324E-02 CRITERION= .3768    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 21 COMPLETED. CUM ITER = 378
*** TIME = .300586E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2703E-04 OSCILLATION LIMIT = 2.132
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.710      CRITERION= .3768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
HT FLOW CONVERGENCE VALUE= .9278E-02 CRITERION= .3766    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 22 COMPLETED. CUM ITER = 379
*** TIME = .301375E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2824E-04 OSCILLATION LIMIT = 2.228

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*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.015 CRITERION= .3767
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1561E-01
 HT FLOW CONVERGENCE VALUE= .9319E-02 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 23 COMPLETED. CUM ITER = 380
 *** TIME = .302164E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2699E-04 OSCILLATION LIMIT = 2.130
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.710 CRITERION= .3767
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9278E-02 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 24 COMPLETED. CUM ITER = 381
 *** TIME = .302953E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2817E-04 OSCILLATION LIMIT = 2.223
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.015 CRITERION= .3766
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560E-01
 HT FLOW CONVERGENCE VALUE= .9315E-02 CRITERION= .3766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 382
 *** TIME = .303742E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2696E-04 OSCILLATION LIMIT = 2.127
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.711 CRITERION= .3766
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9262E-02 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 26 COMPLETED. CUM ITER = 383
 *** TIME = .304531E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2811E-04 OSCILLATION LIMIT = 2.217
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.015 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560E-01
 HT FLOW CONVERGENCE VALUE= .9321E-02 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 27 COMPLETED. CUM ITER = 384
 *** TIME = .305320E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2693E-04 OSCILLATION LIMIT = 2.124
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.712 CRITERION= .3766
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9287E-02 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 28 COMPLETED. CUM ITER = 385
 *** TIME = .306109E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2804E-04 OSCILLATION LIMIT = 2.212
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.015 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560E-01
 HT FLOW CONVERGENCE VALUE= .9318E-02 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 29 COMPLETED. CUM ITER = 386
 *** TIME = .306898E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .2688E-04 OSCILLATION LIMIT = 2.121
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.712 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
 HT FLOW CONVERGENCE VALUE= .9286E-02 CRITERION= .3763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 30 COMPLETED. CUM ITER = 387

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*** TIME = .307687E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2797E-04    OSCILLATION LIMIT = 2.207
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.015    CRITERION= .3763
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560E-01
    HT FLOW CONVERGENCE VALUE= .9314E-02 CRITERION= .3764    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 31 COMPLETED. CUM ITER = 388
*** TIME = .308476E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2685E-04    OSCILLATION LIMIT = 2.118
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.713    CRITERION= .3764
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
    HT FLOW CONVERGENCE VALUE= .9286E-02 CRITERION= .3762    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 32 COMPLETED. CUM ITER = 389
*** TIME = .309265E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2791E-04    OSCILLATION LIMIT = 2.202
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.015    CRITERION= .3763
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1560E-01
    HT FLOW CONVERGENCE VALUE= .9310E-02 CRITERION= .3763    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 33 COMPLETED. CUM ITER = 390
*** TIME = .310054E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2682E-04    OSCILLATION LIMIT = 2.116
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.714    CRITERION= .3763
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
    HT FLOW CONVERGENCE VALUE= .9285E-02 CRITERION= .3761    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 34 COMPLETED. CUM ITER = 391
*** TIME = .310843E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2785E-04    OSCILLATION LIMIT = 2.197
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.015    CRITERION= .3762
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1559E-01
    HT FLOW CONVERGENCE VALUE= .9307E-02 CRITERION= .3762    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 35 COMPLETED. CUM ITER = 392
*** TIME = .311632E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2679E-04    OSCILLATION LIMIT = 2.113
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.715    CRITERION= .3763
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
    HT FLOW CONVERGENCE VALUE= .9286E-02 CRITERION= .3761    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 36 COMPLETED. CUM ITER = 393
*** TIME = .312421E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2779E-04    OSCILLATION LIMIT = 2.193
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 6.015    CRITERION= .3761
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1559E-01
    HT FLOW CONVERGENCE VALUE= .9304E-02 CRITERION= .3761    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 37 COMPLETED. CUM ITER = 394
*** TIME = .313209E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2676E-04    OSCILLATION LIMIT = 2.111
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.715    CRITERION= .3762
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
    HT FLOW CONVERGENCE VALUE= .9285E-02 CRITERION= .3760    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 38 COMPLETED. CUM ITER = 395
*** TIME = .313998E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2774E-04 OSCILLATION LIMIT = 2.188
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.014 CRITERION= .3760
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1559E-01
HT FLOW CONVERGENCE VALUE= .9301E-02 CRITERION= .3761 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 39 COMPLETED. CUM ITER = 396
*** TIME = .314787E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2673E-04 OSCILLATION LIMIT = 2.109
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.716 CRITERION= .3761
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1534E-01
HT FLOW CONVERGENCE VALUE= .9285E-02 CRITERION= .3759 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 40 COMPLETED. CUM ITER = 397
*** TIME = .315576E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .2768E-04 OSCILLATION LIMIT = 2.184

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 16:39:32 JUN 19, 1995 CP= 21648.180
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 35.83 CRITERION= .3776
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5518E-01 CRITERION= .3757 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 398
*** TIME = .323466E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3613E-04 OSCILLATION LIMIT = 28.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.53 CRITERION= .3774
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5337E-01 CRITERION= .3753 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 399
*** TIME = .331355E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4598E-04 OSCILLATION LIMIT = 36.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.84 CRITERION= .3770
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5361E-01 CRITERION= .3751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 400
*** TIME = .339245E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4275E-04 OSCILLATION LIMIT = 33.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.54 CRITERION= .3768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5329E-01 CRITERION= .3746 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 401
*** TIME = .347134E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4503E-04 OSCILLATION LIMIT = 35.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 35.85 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5349E-01 CRITERION= .3744 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 402
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4301E-04 OSCILLATION LIMIT = 33.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.55 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5321E-01 CRITERION= .3740 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 403
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4479E-04 OSCILLATION LIMIT = 35.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.86 CRITERION= .3757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5339E-01 CRITERION= .3737 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 404
 *** TIME = .370802E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4317E-04 OSCILLATION LIMIT = 34.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.56 CRITERION= .3754
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5313E-01 CRITERION= .3733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 405
 *** TIME = .378692E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4460E-04 OSCILLATION LIMIT = 35.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.87 CRITERION= .3750
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5327E-01 CRITERION= .3731 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 406
 *** TIME = .386581E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4328E-04 OSCILLATION LIMIT = 34.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.57 CRITERION= .3748
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5304E-01 CRITERION= .3726 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 407
 *** TIME = .394470E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4445E-04 OSCILLATION LIMIT = 35.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.88 CRITERION= .3743
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5316E-01 CRITERION= .3724 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 408
 *** TIME = .402360E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4335E-04 OSCILLATION LIMIT = 34.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.58 CRITERION= .3741
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5295E-01 CRITERION= .3720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 409
 *** TIME = .410249E+08 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .4433E-04 OSCILLATION LIMIT = 34.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.89 CRITERION= .3737
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5302E-01 CRITERION= .3717 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 410
*** TIME = .418139E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4340E-04 OSCILLATION LIMIT = 34.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.60 CRITERION= .3734
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5289E-01 CRITERION= .3713 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 411
*** TIME = .426028E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4423E-04 OSCILLATION LIMIT = 34.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.90 CRITERION= .3730
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5302E-01 CRITERION= .3711 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 412
*** TIME = .433917E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4343E-04 OSCILLATION LIMIT = 34.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.61 CRITERION= .3728
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5285E-01 CRITERION= .3706 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 413
*** TIME = .441807E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4415E-04 OSCILLATION LIMIT = 34.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.91 CRITERION= .3723
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5294E-01 CRITERION= .3704 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 414
*** TIME = .449696E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4344E-04 OSCILLATION LIMIT = 34.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.62 CRITERION= .3721
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5276E-01 CRITERION= .3699 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 415
*** TIME = .457586E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4408E-04 OSCILLATION LIMIT = 34.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.92 CRITERION= .3717
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5283E-01 CRITERION= .3697 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 416
*** TIME = .465475E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4345E-04 OSCILLATION LIMIT = 34.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.63 CRITERION= .3714
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5266E-01 CRITERION= .3693 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 417
*** TIME = .473364E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4402E-04 OSCILLATION LIMIT = 34.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.93 CRITERION= .3710
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5257E-01 CRITERION= .3690 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 418
*** TIME = .481254E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4345E-04 OSCILLATION LIMIT = 34.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .3708
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5210E-01 CRITERION= .3686 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 419
*** TIME = .489143E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4398E-04 OSCILLATION LIMIT = 34.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.94 CRITERION= .3703
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5205E-01 CRITERION= .3684 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 420
*** TIME = .497033E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4345E-04 OSCILLATION LIMIT = 34.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.65 CRITERION= .3701
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5189E-01 CRITERION= .3679 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 421
*** TIME = .504922E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4394E-04 OSCILLATION LIMIT = 34.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.96 CRITERION= .3697
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5194E-01 CRITERION= .3677 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 422
*** TIME = .512811E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4344E-04 OSCILLATION LIMIT = 34.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.66 CRITERION= .3694
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5181E-01 CRITERION= .3673 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 423
*** TIME = .520701E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4390E-04 OSCILLATION LIMIT = 34.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.97 CRITERION= .3690
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
HT FLOW CONVERGENCE VALUE= .5187E-01 CRITERION= .3670 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 424
*** TIME = .528590E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4343E-04 OSCILLATION LIMIT = 34.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.67 CRITERION= .3688
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01

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HT FLOW CONVERGENCE VALUE= .5172E-01 CRITERION= .3666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 425
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4386E-04 OSCILLATION LIMIT = 34.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.98 CRITERION= .3683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5178E-01 CRITERION= .3664 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 426
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4341E-04 OSCILLATION LIMIT = 34.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.68 CRITERION= .3681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5164E-01 CRITERION= .3659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 427
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4382E-04 OSCILLATION LIMIT = 34.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.99 CRITERION= .3677
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5168E-01 CRITERION= .3657 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 428
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4339E-04 OSCILLATION LIMIT = 34.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.69 CRITERION= .3674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5155E-01 CRITERION= .3653 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 429
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4379E-04 OSCILLATION LIMIT = 34.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.00 CRITERION= .3670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5159E-01 CRITERION= .3650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 430
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4336E-04 OSCILLATION LIMIT = 34.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.70 CRITERION= .3668
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5124E-01 CRITERION= .3646 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 431
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4375E-04 OSCILLATION LIMIT = 34.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.01 CRITERION= .3663
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5120E-01 CRITERION= .3644 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 432
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4335E-04 OSCILLATION LIMIT = 34.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.71 CRITERION= .3661
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5108E-01 CRITERION= .3639 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 433
 *** TIME = .599595E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4373E-04 OSCILLATION LIMIT = 34.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.02 CRITERION= .3657
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5116E-01 CRITERION= .3637 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 434
 *** TIME = .607484E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4333E-04 OSCILLATION LIMIT = 34.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.73 CRITERION= .3654
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5103E-01 CRITERION= .3633 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 435
 *** TIME = .615374E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4370E-04 OSCILLATION LIMIT = 34.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 36.03 CRITERION= .3650
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5100E-01 CRITERION= .3630 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 39 COMPLETED. CUM ITER = 436
 *** TIME = .623263E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4331E-04 OSCILLATION LIMIT = 34.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.74 CRITERION= .3648
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9365E-01
 HT FLOW CONVERGENCE VALUE= .5087E-01 CRITERION= .3626 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 40 COMPLETED. CUM ITER = 437
 *** TIME = .631152E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4367E-04 OSCILLATION LIMIT = 34.45

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 17:28:51 JUN 19, 1995 CP= 23876.420
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.61 CRITERION= .3630
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6370E-01
 HT FLOW CONVERGENCE VALUE= .2617E-01 CRITERION= .3624 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 1 COMPLETED. CUM ITER = 438
 *** TIME = .639042E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7340E-04 OSCILLATION LIMIT = 57.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3628
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6036E-01
 HT FLOW CONVERGENCE VALUE= .2573E-01 CRITERION= .3620 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 2 COMPLETED. CUM ITER = 439
 *** TIME = .646931E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7396E-04 OSCILLATION LIMIT = 58.35

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.61 CRITERION= .3624
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5535E-01
 HT FLOW CONVERGENCE VALUE= .2527E-01 CRITERION= .3618 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 3 COMPLETED. CUM ITER = 440
 *** TIME = .654821E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7256E-04 OSCILLATION LIMIT = 57.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3622
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6069E-01
 HT FLOW CONVERGENCE VALUE= .2567E-01 CRITERION= .3614 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 4 COMPLETED. CUM ITER = 441
 *** TIME = .662710E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7391E-04 OSCILLATION LIMIT = 58.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.61 CRITERION= .3618
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5608E-01
 HT FLOW CONVERGENCE VALUE= .2528E-01 CRITERION= .3612 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 442
 *** TIME = .670599E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7264E-04 OSCILLATION LIMIT = 57.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.31 CRITERION= .3617
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5998E-01
 HT FLOW CONVERGENCE VALUE= .2557E-01 CRITERION= .3609 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 443
 *** TIME = .678489E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7391E-04 OSCILLATION LIMIT = 58.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.62 CRITERION= .3613
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5670E-01
 HT FLOW CONVERGENCE VALUE= .2529E-01 CRITERION= .3607 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 444
 *** TIME = .686378E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7269E-04 OSCILLATION LIMIT = 57.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.32 CRITERION= .3611
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5945E-01
 HT FLOW CONVERGENCE VALUE= .2547E-01 CRITERION= .3603 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 445
 *** TIME = .694268E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7391E-04 OSCILLATION LIMIT = 58.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.62 CRITERION= .3607
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5716E-01
 HT FLOW CONVERGENCE VALUE= .2528E-01 CRITERION= .3601 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 446
 *** TIME = .702157E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7272E-04 OSCILLATION LIMIT = 57.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.32 CRITERION= .3605
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5906E-01
 HT FLOW CONVERGENCE VALUE= .2539E-01 CRITERION= .3597 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 447

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*** TIME = .710046E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7390E-04    OSCILLATION LIMIT = 58.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.62    CRITERION= .3601
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5751E-01
    HT FLOW CONVERGENCE VALUE= .2526E-01    CRITERION= .3595    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 448
*** TIME = .717936E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7275E-04    OSCILLATION LIMIT = 57.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.32    CRITERION= .3599
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5878E-01
    HT FLOW CONVERGENCE VALUE= .2532E-01    CRITERION= .3591    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 449
*** TIME = .725825E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7388E-04    OSCILLATION LIMIT = 58.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.62    CRITERION= .3596
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5776E-01
    HT FLOW CONVERGENCE VALUE= .2524E-01    CRITERION= .3590    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 450
*** TIME = .733715E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7276E-04    OSCILLATION LIMIT = 57.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.32    CRITERION= .3594
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5857E-01
    HT FLOW CONVERGENCE VALUE= .2527E-01    CRITERION= .3586    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 451
*** TIME = .741604E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7387E-04    OSCILLATION LIMIT = 58.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.63    CRITERION= .3590
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5795E-01
    HT FLOW CONVERGENCE VALUE= .2522E-01    CRITERION= .3584    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 452
*** TIME = .749493E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7278E-04    OSCILLATION LIMIT = 57.42
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.33    CRITERION= .3588
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5842E-01
    HT FLOW CONVERGENCE VALUE= .2521E-01    CRITERION= .3580    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 453
*** TIME = .757383E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7386E-04    OSCILLATION LIMIT = 58.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.63    CRITERION= .3584
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5808E-01
    HT FLOW CONVERGENCE VALUE= .2519E-01    CRITERION= .3578    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 454
*** TIME = .765272E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7279E-04    OSCILLATION LIMIT = 57.42
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 17.33    CRITERION= .3582
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5831E-01
    HT FLOW CONVERGENCE VALUE= .2516E-01    CRITERION= .3574    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 455
*** TIME = .773162E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7385E-04 OSCILLATION LIMIT = 58.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.63 CRITERION= .3579
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5818E-01
HT FLOW CONVERGENCE VALUE= .2516E-01 CRITERION= .3573 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 456
*** TIME = .781051E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7280E-04 OSCILLATION LIMIT = 57.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .3577
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5823E-01
HT FLOW CONVERGENCE VALUE= .2511E-01 CRITERION= .3569 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 457
*** TIME = .788940E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7383E-04 OSCILLATION LIMIT = 58.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.63 CRITERION= .3573
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5826E-01
HT FLOW CONVERGENCE VALUE= .2512E-01 CRITERION= .3567 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 458
*** TIME = .796830E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7280E-04 OSCILLATION LIMIT = 57.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.33 CRITERION= .3571
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5818E-01
HT FLOW CONVERGENCE VALUE= .2506E-01 CRITERION= .3563 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 459
*** TIME = .804719E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7382E-04 OSCILLATION LIMIT = 58.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.64 CRITERION= .3567
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5831E-01
HT FLOW CONVERGENCE VALUE= .2508E-01 CRITERION= .3561 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 460
*** TIME = .812609E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7281E-04 OSCILLATION LIMIT = 57.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.34 CRITERION= .3565
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5814E-01
HT FLOW CONVERGENCE VALUE= .2501E-01 CRITERION= .3557 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 461
*** TIME = .820498E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7381E-04 OSCILLATION LIMIT = 58.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.64 CRITERION= .3562
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5835E-01
HT FLOW CONVERGENCE VALUE= .2504E-01 CRITERION= .3556 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 462
*** TIME = .828387E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7281E-04 OSCILLATION LIMIT = 57.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.34 CRITERION= .3560

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5812E-01
 HT FLOW CONVERGENCE VALUE= .2496E-01 CRITERION= .3552 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 463
 *** TIME = .836277E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7380E-04 OSCILLATION LIMIT = 58.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.64 CRITERION= .3556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5837E-01
 HT FLOW CONVERGENCE VALUE= .2500E-01 CRITERION= .3550 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 464
 *** TIME = .844166E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7282E-04 OSCILLATION LIMIT = 57.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.34 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5810E-01
 HT FLOW CONVERGENCE VALUE= .2492E-01 CRITERION= .3546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 465
 *** TIME = .852056E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7379E-04 OSCILLATION LIMIT = 58.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.64 CRITERION= .3550
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5839E-01
 HT FLOW CONVERGENCE VALUE= .2497E-01 CRITERION= .3544 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 466
 *** TIME = .859945E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7282E-04 OSCILLATION LIMIT = 57.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.34 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5810E-01
 HT FLOW CONVERGENCE VALUE= .2488E-01 CRITERION= .3540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 467
 *** TIME = .867834E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7378E-04 OSCILLATION LIMIT = 58.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5840E-01
 HT FLOW CONVERGENCE VALUE= .2493E-01 CRITERION= .3538 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 468
 *** TIME = .875724E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7282E-04 OSCILLATION LIMIT = 57.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .3543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5810E-01
 HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .3535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 469
 *** TIME = .883613E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7377E-04 OSCILLATION LIMIT = 58.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .3539
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5841E-01
 HT FLOW CONVERGENCE VALUE= .2489E-01 CRITERION= .3533 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 470
 *** TIME = .891503E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7283E-04 OSCILLATION LIMIT = 57.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .3537
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5810E-01
 HT FLOW CONVERGENCE VALUE= .2480E-01 CRITERION= .3529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 471
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7376E-04 OSCILLATION LIMIT = 58.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5842E-01
 HT FLOW CONVERGENCE VALUE= .2485E-01 CRITERION= .3527 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 472
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7283E-04 OSCILLATION LIMIT = 57.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .3531
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5810E-01
 HT FLOW CONVERGENCE VALUE= .2476E-01 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 473
 *** TIME = .915171E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7375E-04 OSCILLATION LIMIT = 58.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .3527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5842E-01
 HT FLOW CONVERGENCE VALUE= .2481E-01 CRITERION= .3521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 474
 *** TIME = .923060E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7283E-04 OSCILLATION LIMIT = 57.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .3526
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5811E-01
 HT FLOW CONVERGENCE VALUE= .2472E-01 CRITERION= .3517 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 38 COMPLETED. CUM ITER = 475
 *** TIME = .930950E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7374E-04 OSCILLATION LIMIT = 58.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.66 CRITERION= .3522
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5842E-01
 HT FLOW CONVERGENCE VALUE= .2477E-01 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 39 COMPLETED. CUM ITER = 476
 *** TIME = .938839E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7283E-04 OSCILLATION LIMIT = 57.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .3520
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5812E-01
 HT FLOW CONVERGENCE VALUE= .2468E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 40 COMPLETED. CUM ITER = 477
 *** TIME = .946728E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7373E-04 OSCILLATION LIMIT = 58.17

***** ANSYS SOLVE COMMAND *****

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 10.36 CRITERION= .3513
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6352E-01
 HT FLOW CONVERGENCE VALUE= .1919E-01 CRITERION= .3510 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 1 COMPLETED. CUM ITER = 478
 *** TIME = .954618E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6577E-04 OSCILLATION LIMIT = 51.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.06 CRITERION= .3512
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6200E-01
 HT FLOW CONVERGENCE VALUE= .1882E-01 CRITERION= .3507 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 2 COMPLETED. CUM ITER = 479
 *** TIME = .962507E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6687E-04 OSCILLATION LIMIT = 52.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3508
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6093E-01
 HT FLOW CONVERGENCE VALUE= .1850E-01 CRITERION= .3505 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 3 COMPLETED. CUM ITER = 480
 *** TIME = .970397E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6682E-04 OSCILLATION LIMIT = 52.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.06 CRITERION= .3507
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6216E-01
 HT FLOW CONVERGENCE VALUE= .1878E-01 CRITERION= .3502 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 481
 *** TIME = .978286E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6685E-04 OSCILLATION LIMIT = 52.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3503
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6114E-01
 HT FLOW CONVERGENCE VALUE= .1852E-01 CRITERION= .3500 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 482
 *** TIME = .986175E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6674E-04 OSCILLATION LIMIT = 52.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.06 CRITERION= .3502
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6198E-01
 HT FLOW CONVERGENCE VALUE= .1872E-01 CRITERION= .3497 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 483
 *** TIME = .994065E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6692E-04 OSCILLATION LIMIT = 52.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6132E-01
 HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .3495 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 484
 *** TIME = .100195E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6668E-04 OSCILLATION LIMIT = 52.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3497
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6185E-01
 HT FLOW CONVERGENCE VALUE= .1867E-01 CRITERION= .3492 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 485
*** TIME = .100984E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6697E-04 OSCILLATION LIMIT = 52.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3493
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6146E-01
HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .3490 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 486
*** TIME = .101773E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6663E-04 OSCILLATION LIMIT = 52.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3492
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6175E-01
HT FLOW CONVERGENCE VALUE= .1863E-01 CRITERION= .3487 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 487
*** TIME = .102562E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6700E-04 OSCILLATION LIMIT = 52.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3488
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6156E-01
HT FLOW CONVERGENCE VALUE= .1852E-01 CRITERION= .3485 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 488
*** TIME = .103351E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6659E-04 OSCILLATION LIMIT = 52.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3487
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6168E-01
HT FLOW CONVERGENCE VALUE= .1859E-01 CRITERION= .3482 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 489
*** TIME = .104140E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6703E-04 OSCILLATION LIMIT = 52.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3483
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6164E-01
HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .3480 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 490
*** TIME = .104929E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6657E-04 OSCILLATION LIMIT = 52.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3482
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6164E-01
HT FLOW CONVERGENCE VALUE= .1855E-01 CRITERION= .3477 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 491
*** TIME = .105718E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6704E-04 OSCILLATION LIMIT = 52.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3478
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6169E-01
HT FLOW CONVERGENCE VALUE= .1850E-01 CRITERION= .3475 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 492
*** TIME = .106507E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6655E-04 OSCILLATION LIMIT = 52.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3477
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6161E-01

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HT FLOW CONVERGENCE VALUE= .1852E-01 CRITERION= .3472 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 493
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6705E-04 OSCILLATION LIMIT = 52.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3473
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6174E-01
 HT FLOW CONVERGENCE VALUE= .1848E-01 CRITERION= .3470 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 494
 *** TIME = .108085E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6653E-04 OSCILLATION LIMIT = 52.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3472
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6160E-01
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .3467 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 495
 *** TIME = .108874E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6706E-04 OSCILLATION LIMIT = 52.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6177E-01
 HT FLOW CONVERGENCE VALUE= .1847E-01 CRITERION= .3465 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 496
 *** TIME = .109663E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6652E-04 OSCILLATION LIMIT = 52.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3467
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6159E-01
 HT FLOW CONVERGENCE VALUE= .1847E-01 CRITERION= .3462 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 497
 *** TIME = .110452E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6706E-04 OSCILLATION LIMIT = 52.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6180E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3460 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 498
 *** TIME = .111241E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6651E-04 OSCILLATION LIMIT = 52.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6159E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 499
 *** TIME = .112030E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6706E-04 OSCILLATION LIMIT = 52.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6182E-01
 HT FLOW CONVERGENCE VALUE= .1842E-01 CRITERION= .3456 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 500
 *** TIME = .112818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6650E-04 OSCILLATION LIMIT = 52.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6160E-01
 HT FLOW CONVERGENCE VALUE= .1840E-01 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 501
 *** TIME = .113607E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6706E-04 OSCILLATION LIMIT = 52.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.37 CRITERION= .3453
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6184E-01
 HT FLOW CONVERGENCE VALUE= .1840E-01 CRITERION= .3451 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 25 COMPLETED. CUM ITER = 502
 *** TIME = .114396E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6650E-04 OSCILLATION LIMIT = 52.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3452
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6160E-01
 HT FLOW CONVERGENCE VALUE= .1837E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 26 COMPLETED. CUM ITER = 503
 *** TIME = .115185E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6706E-04 OSCILLATION LIMIT = 52.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6184E-01
 HT FLOW CONVERGENCE VALUE= .1838E-01 CRITERION= .3446 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 27 COMPLETED. CUM ITER = 504
 *** TIME = .115974E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6649E-04 OSCILLATION LIMIT = 52.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.07 CRITERION= .3447
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6161E-01
 HT FLOW CONVERGENCE VALUE= .1834E-01 CRITERION= .3442 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 28 COMPLETED. CUM ITER = 505
 *** TIME = .116763E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6705E-04 OSCILLATION LIMIT = 52.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3443
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6185E-01
 HT FLOW CONVERGENCE VALUE= .1834E-01 CRITERION= .3441 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 29 COMPLETED. CUM ITER = 506
 *** TIME = .117552E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6649E-04 OSCILLATION LIMIT = 52.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6162E-01
 HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 30 COMPLETED. CUM ITER = 507
 *** TIME = .118341E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6705E-04 OSCILLATION LIMIT = 52.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6186E-01
 HT FLOW CONVERGENCE VALUE= .1832E-01 CRITERION= .3436 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 31 COMPLETED. CUM ITER = 508
 *** TIME = .119130E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6649E-04 OSCILLATION LIMIT = 52.46

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3437
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6164E-01
HT FLOW CONVERGENCE VALUE= .1828E-01 CRITERION= .3432 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 509

*** TIME = .119919E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6704E-04 OSCILLATION LIMIT = 52.89

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3433
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6187E-01
HT FLOW CONVERGENCE VALUE= .1829E-01 CRITERION= .3431 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 510

*** TIME = .120708E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6649E-04 OSCILLATION LIMIT = 52.45

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3432
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6165E-01
HT FLOW CONVERGENCE VALUE= .1825E-01 CRITERION= .3427 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 511

*** TIME = .121497E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6704E-04 OSCILLATION LIMIT = 52.89

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3428
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6188E-01
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .3426 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 512

*** TIME = .122286E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6648E-04 OSCILLATION LIMIT = 52.45

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3427
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6167E-01
HT FLOW CONVERGENCE VALUE= .1822E-01 CRITERION= .3422 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 513

*** TIME = .123075E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6703E-04 OSCILLATION LIMIT = 52.88

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3424
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6189E-01
HT FLOW CONVERGENCE VALUE= .1824E-01 CRITERION= .3421 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 514

*** TIME = .123864E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6648E-04 OSCILLATION LIMIT = 52.45

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3422
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6168E-01
HT FLOW CONVERGENCE VALUE= .1820E-01 CRITERION= .3417 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 515

*** TIME = .124653E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .6703E-04 OSCILLATION LIMIT = 52.88

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3419
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6190E-01
HT FLOW CONVERGENCE VALUE= .1822E-01 CRITERION= .3416 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 516

*** TIME = .125441E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6648E-04 OSCILLATION LIMIT = 52.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.08 CRITERION= .3417
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6170E-01
 HT FLOW CONVERGENCE VALUE= .1817E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 517
 *** TIME = .126230E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6702E-04 OSCILLATION LIMIT = 52.88

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:52:12 JUN 19, 1995 CP= 28379.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 6.895 CRITERION= .3413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5808E-01
 HT FLOW CONVERGENCE VALUE= .1603E-01 CRITERION= .3411 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 518
 *** TIME = .127019E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5825E-04 OSCILLATION LIMIT = 45.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.595 CRITERION= .3412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5721E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 519
 *** TIME = .127808E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5908E-04 OSCILLATION LIMIT = 46.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.896 CRITERION= .3408
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5755E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 520
 *** TIME = .128597E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5868E-04 OSCILLATION LIMIT = 46.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.595 CRITERION= .3407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5734E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 521
 *** TIME = .129386E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5904E-04 OSCILLATION LIMIT = 46.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.896 CRITERION= .3404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5755E-01
 HT FLOW CONVERGENCE VALUE= .1568E-01 CRITERION= .3402 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 522
 *** TIME = .130175E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5868E-04 OSCILLATION LIMIT = 46.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.596 CRITERION= .3403
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5735E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3399 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 523
*** TIME = .130964E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5904E-04 OSCILLATION LIMIT = 46.58
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.896 CRITERION= .3400
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5757E-01
HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .3398 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 524
*** TIME = .131753E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5867E-04 OSCILLATION LIMIT = 46.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.596 CRITERION= .3399
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5735E-01
HT FLOW CONVERGENCE VALUE= .1568E-01 CRITERION= .3395 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 525
*** TIME = .132542E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5904E-04 OSCILLATION LIMIT = 46.58
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.897 CRITERION= .3396
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5758E-01
HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .3394 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 526
*** TIME = .133331E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5866E-04 OSCILLATION LIMIT = 46.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.597 CRITERION= .3394
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5737E-01
HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .3391 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 527
*** TIME = .134120E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5903E-04 OSCILLATION LIMIT = 46.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.897 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5759E-01
HT FLOW CONVERGENCE VALUE= .1566E-01 CRITERION= .3390 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 528
*** TIME = .134909E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5866E-04 OSCILLATION LIMIT = 46.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.597 CRITERION= .3390
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5738E-01
HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3386 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 529
*** TIME = .135698E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5903E-04 OSCILLATION LIMIT = 46.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.897 CRITERION= .3387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5760E-01
HT FLOW CONVERGENCE VALUE= .1563E-01 CRITERION= .3385 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 530
*** TIME = .136487E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5865E-04 OSCILLATION LIMIT = 46.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.597 CRITERION= .3386

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5739E-01
 HT FLOW CONVERGENCE VALUE= .1562E-01 CRITERION= .3382 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 531
 *** TIME = .137276E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5902E-04 OSCILLATION LIMIT = 46.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.898 CRITERION= .3383
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5760E-01
 HT FLOW CONVERGENCE VALUE= .1562E-01 CRITERION= .3381 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 532
 *** TIME = .138065E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5865E-04 OSCILLATION LIMIT = 46.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.598 CRITERION= .3382
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5741E-01
 HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .3378 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 533
 *** TIME = .138853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5902E-04 OSCILLATION LIMIT = 46.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.898 CRITERION= .3378
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5761E-01
 HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .3377 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 534
 *** TIME = .139642E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5864E-04 OSCILLATION LIMIT = 46.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.598 CRITERION= .3377
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5742E-01
 HT FLOW CONVERGENCE VALUE= .1558E-01 CRITERION= .3374 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 535
 *** TIME = .140431E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5901E-04 OSCILLATION LIMIT = 46.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.898 CRITERION= .3374
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5762E-01
 HT FLOW CONVERGENCE VALUE= .1558E-01 CRITERION= .3372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 536
 *** TIME = .141220E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5864E-04 OSCILLATION LIMIT = 46.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.599 CRITERION= .3373
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5744E-01
 HT FLOW CONVERGENCE VALUE= .1556E-01 CRITERION= .3369 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 537
 *** TIME = .142009E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5901E-04 OSCILLATION LIMIT = 46.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.899 CRITERION= .3370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5763E-01
 HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .3368 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 538
 *** TIME = .142798E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5864E-04 OSCILLATION LIMIT = 46.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.599 CRITERION= .3369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5745E-01
 HT FLOW CONVERGENCE VALUE= .1554E-01 CRITERION= .3365 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 539
 *** TIME = .143587E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5900E-04 OSCILLATION LIMIT = 46.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.899 CRITERION= .3366
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5764E-01
 HT FLOW CONVERGENCE VALUE= .1554E-01 CRITERION= .3364 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 540
 *** TIME = .144376E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5863E-04 OSCILLATION LIMIT = 46.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.600 CRITERION= .3364
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5747E-01
 HT FLOW CONVERGENCE VALUE= .1552E-01 CRITERION= .3361 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 541
 *** TIME = .145165E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5899E-04 OSCILLATION LIMIT = 46.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.899 CRITERION= .3361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5764E-01
 HT FLOW CONVERGENCE VALUE= .1552E-01 CRITERION= .3360 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 542
 *** TIME = .145954E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5863E-04 OSCILLATION LIMIT = 46.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.600 CRITERION= .3360
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5748E-01
 HT FLOW CONVERGENCE VALUE= .1550E-01 CRITERION= .3356 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 543
 *** TIME = .146743E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5899E-04 OSCILLATION LIMIT = 46.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.900 CRITERION= .3357
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5765E-01
 HT FLOW CONVERGENCE VALUE= .1551E-01 CRITERION= .3355 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 544
 *** TIME = .147532E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5863E-04 OSCILLATION LIMIT = 46.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.600 CRITERION= .3356
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5750E-01
 HT FLOW CONVERGENCE VALUE= .1548E-01 CRITERION= .3352 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 545
 *** TIME = .148321E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5898E-04 OSCILLATION LIMIT = 46.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.900 CRITERION= .3353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5766E-01
 HT FLOW CONVERGENCE VALUE= .1549E-01 CRITERION= .3351 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 546
 *** TIME = .149110E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5862E-04 OSCILLATION LIMIT = 46.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.601 CRITERION= .3352
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5751E-01
 HT FLOW CONVERGENCE VALUE= .1546E-01 CRITERION= .3348 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 547
 *** TIME = .149899E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5898E-04 OSCILLATION LIMIT = 46.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.900 CRITERION= .3348
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5766E-01
 HT FLOW CONVERGENCE VALUE= .1547E-01 CRITERION= .3347 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 548
 *** TIME = .150688E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5862E-04 OSCILLATION LIMIT = 46.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.601 CRITERION= .3347
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5753E-01
 HT FLOW CONVERGENCE VALUE= .1544E-01 CRITERION= .3344 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 549
 *** TIME = .151477E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5897E-04 OSCILLATION LIMIT = 46.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.901 CRITERION= .3344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5767E-01
 HT FLOW CONVERGENCE VALUE= .1545E-01 CRITERION= .3342 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 550
 *** TIME = .152265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5862E-04 OSCILLATION LIMIT = 46.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.602 CRITERION= .3343
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5754E-01
 HT FLOW CONVERGENCE VALUE= .1542E-01 CRITERION= .3339 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 551
 *** TIME = .153054E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5896E-04 OSCILLATION LIMIT = 46.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.901 CRITERION= .3340
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5768E-01
 HT FLOW CONVERGENCE VALUE= .1544E-01 CRITERION= .3338 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 552
 *** TIME = .153843E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5861E-04 OSCILLATION LIMIT = 46.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.602 CRITERION= .3339
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5755E-01
 HT FLOW CONVERGENCE VALUE= .1541E-01 CRITERION= .3335 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 553
 *** TIME = .154632E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5896E-04 OSCILLATION LIMIT = 46.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.901 CRITERION= .3336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5769E-01
 HT FLOW CONVERGENCE VALUE= .1542E-01 CRITERION= .3334 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 554
 *** TIME = .155421E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5861E-04 OSCILLATION LIMIT = 46.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.602 CRITERION= .3334
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5757E-01
 HT FLOW CONVERGENCE VALUE= .1539E-01 CRITERION= .3331 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 555
 *** TIME = .156210E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5895E-04 OSCILLATION LIMIT = 46.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.902 CRITERION= .3331
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5770E-01
 HT FLOW CONVERGENCE VALUE= .1540E-01 CRITERION= .3330 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 556
 *** TIME = .156999E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5860E-04 OSCILLATION LIMIT = 46.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.603 CRITERION= .3330
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5759E-01
 HT FLOW CONVERGENCE VALUE= .1537E-01 CRITERION= .3326 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 557
 *** TIME = .157788E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5895E-04 OSCILLATION LIMIT = 46.50

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:50:41 JUN 19, 1995 CP= 30589.670
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 4.734 CRITERION= .3327
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6487E-01
 HT FLOW CONVERGENCE VALUE= .1697E-01 CRITERION= .3325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 558
 *** TIME = .158577E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4863E-04 OSCILLATION LIMIT = 38.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.435 CRITERION= .3325
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6457E-01
 HT FLOW CONVERGENCE VALUE= .1695E-01 CRITERION= .3322 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 559
 *** TIME = .159366E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4879E-04 OSCILLATION LIMIT = 38.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.734 CRITERION= .3322
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6355E-01
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .3321 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 560
 *** TIME = .160155E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4896E-04 OSCILLATION LIMIT = 38.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.436 CRITERION= .3321
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6457E-01

HT FLOW CONVERGENCE VALUE= .1693E-01 CRITERION= .3318 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 561
 *** TIME = .160944E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4881E-04 OSCILLATION LIMIT = 38.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3318
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6371E-01
 HT FLOW CONVERGENCE VALUE= .1670E-01 CRITERION= .3316 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 562
 *** TIME = .161733E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4891E-04 OSCILLATION LIMIT = 38.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.436 CRITERION= .3317
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6445E-01
 HT FLOW CONVERGENCE VALUE= .1689E-01 CRITERION= .3313 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 563
 *** TIME = .162522E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4884E-04 OSCILLATION LIMIT = 38.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3313
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6384E-01
 HT FLOW CONVERGENCE VALUE= .1670E-01 CRITERION= .3312 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 564
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4888E-04 OSCILLATION LIMIT = 38.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.436 CRITERION= .3312
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6436E-01
 HT FLOW CONVERGENCE VALUE= .1684E-01 CRITERION= .3309 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 565
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4886E-04 OSCILLATION LIMIT = 38.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3309
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6394E-01
 HT FLOW CONVERGENCE VALUE= .1671E-01 CRITERION= .3308 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 566
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4885E-04 OSCILLATION LIMIT = 38.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.436 CRITERION= .3308
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6430E-01
 HT FLOW CONVERGENCE VALUE= .1681E-01 CRITERION= .3304 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 567
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4887E-04 OSCILLATION LIMIT = 38.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3305
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6402E-01
 HT FLOW CONVERGENCE VALUE= .1670E-01 CRITERION= .3303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 568
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4883E-04 OSCILLATION LIMIT = 38.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.436 CRITERION= .3303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6426E-01
 HT FLOW CONVERGENCE VALUE= .1677E-01 CRITERION= .3300 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 569
 *** TIME = .167255E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4888E-04 OSCILLATION LIMIT = 38.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3300
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6409E-01
 HT FLOW CONVERGENCE VALUE= .1669E-01 CRITERION= .3299 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 570
 *** TIME = .168044E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4881E-04 OSCILLATION LIMIT = 38.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.437 CRITERION= .3299
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6423E-01
 HT FLOW CONVERGENCE VALUE= .1674E-01 CRITERION= .3296 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 571
 *** TIME = .168833E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4889E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3296
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6413E-01
 HT FLOW CONVERGENCE VALUE= .1668E-01 CRITERION= .3294 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 572
 *** TIME = .169622E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4880E-04 OSCILLATION LIMIT = 38.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.437 CRITERION= .3295
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6422E-01
 HT FLOW CONVERGENCE VALUE= .1672E-01 CRITERION= .3291 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 573
 *** TIME = .170411E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4889E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3291
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6417E-01
 HT FLOW CONVERGENCE VALUE= .1667E-01 CRITERION= .3290 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 574
 *** TIME = .171200E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4879E-04 OSCILLATION LIMIT = 38.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.437 CRITERION= .3290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6421E-01
 HT FLOW CONVERGENCE VALUE= .1669E-01 CRITERION= .3287 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 575
 *** TIME = .171989E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4889E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.735 CRITERION= .3287
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6420E-01
 HT FLOW CONVERGENCE VALUE= .1665E-01 CRITERION= .3286 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 576
 *** TIME = .172778E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4878E-04 OSCILLATION LIMIT = 38.48

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.437 CRITERION= .3286
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6421E-01
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .3282 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 577
 *** TIME = .173567E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4889E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.736 CRITERION= .3283
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6423E-01
 HT FLOW CONVERGENCE VALUE= .1663E-01 CRITERION= .3281 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 578
 *** TIME = .174356E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4877E-04 OSCILLATION LIMIT = 38.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.437 CRITERION= .3281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6421E-01
 HT FLOW CONVERGENCE VALUE= .1663E-01 CRITERION= .3278 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 579
 *** TIME = .175145E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4889E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.736 CRITERION= .3278
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6426E-01
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .3277 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 580
 *** TIME = .175934E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4876E-04 OSCILLATION LIMIT = 38.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.438 CRITERION= .3277
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6422E-01
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .3274 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 581
 *** TIME = .176723E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4888E-04 OSCILLATION LIMIT = 38.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.736 CRITERION= .3274
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6428E-01
 HT FLOW CONVERGENCE VALUE= .1659E-01 CRITERION= .3272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 582
 *** TIME = .177512E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4875E-04 OSCILLATION LIMIT = 38.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.438 CRITERION= .3273
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6423E-01
 HT FLOW CONVERGENCE VALUE= .1657E-01 CRITERION= .3269 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 583
 *** TIME = .178300E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4888E-04 OSCILLATION LIMIT = 38.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.736 CRITERION= .3269
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6430E-01
 HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3268 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 584

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*** TIME = .179089E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4875E-04    OSCILLATION LIMIT = 38.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.438    CRITERION= .3268
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6425E-01
    HT FLOW CONVERGENCE VALUE= .1654E-01    CRITERION= .3265    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 585
*** TIME = .179878E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4887E-04    OSCILLATION LIMIT = 38.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.736    CRITERION= .3265
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6432E-01
    HT FLOW CONVERGENCE VALUE= .1653E-01    CRITERION= .3264    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 586
*** TIME = .180667E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4874E-04    OSCILLATION LIMIT = 38.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.438    CRITERION= .3264
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6426E-01
    HT FLOW CONVERGENCE VALUE= .1652E-01    CRITERION= .3260    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 587
*** TIME = .181456E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4887E-04    OSCILLATION LIMIT = 38.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.736    CRITERION= .3261
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6433E-01
    HT FLOW CONVERGENCE VALUE= .1651E-01    CRITERION= .3259    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 588
*** TIME = .182245E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4874E-04    OSCILLATION LIMIT = 38.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.439    CRITERION= .3259
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6427E-01
    HT FLOW CONVERGENCE VALUE= .1648E-01    CRITERION= .3256    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 589
*** TIME = .183034E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4886E-04    OSCILLATION LIMIT = 38.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.736    CRITERION= .3256
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6435E-01
    HT FLOW CONVERGENCE VALUE= .1648E-01    CRITERION= .3255    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 590
*** TIME = .183823E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4873E-04    OSCILLATION LIMIT = 38.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.439    CRITERION= .3255
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6429E-01
    HT FLOW CONVERGENCE VALUE= .1646E-01    CRITERION= .3252    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 591
*** TIME = .184612E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4886E-04    OSCILLATION LIMIT = 38.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 4.736    CRITERION= .3252
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6436E-01
    HT FLOW CONVERGENCE VALUE= .1646E-01    CRITERION= .3250    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 592
*** TIME = .185401E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4873E-04 OSCILLATION LIMIT = 38.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.439 CRITERION= .3251
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6430E-01
HT FLOW CONVERGENCE VALUE= .1644E-01 CRITERION= .3247 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 593
*** TIME = .186190E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4885E-04 OSCILLATION LIMIT = 38.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.737 CRITERION= .3247
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6438E-01
HT FLOW CONVERGENCE VALUE= .1644E-01 CRITERION= .3246 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 594
*** TIME = .186979E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4872E-04 OSCILLATION LIMIT = 38.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.439 CRITERION= .3246
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6431E-01
HT FLOW CONVERGENCE VALUE= .1642E-01 CRITERION= .3243 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 595
*** TIME = .187768E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4885E-04 OSCILLATION LIMIT = 38.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.737 CRITERION= .3243
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6439E-01
HT FLOW CONVERGENCE VALUE= .1642E-01 CRITERION= .3242 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 596
*** TIME = .188557E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4872E-04 OSCILLATION LIMIT = 38.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 4.439 CRITERION= .3242
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6433E-01
HT FLOW CONVERGENCE VALUE= .1639E-01 CRITERION= .3238 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 597
*** TIME = .189346E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4884E-04 OSCILLATION LIMIT = 38.53

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 21:27:37 JUN 19, 1995 CP= 32780.610
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3239
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5684E-01
HT FLOW CONVERGENCE VALUE= .1470E-01 CRITERION= .3238 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 598
*** TIME = .190135E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4604E-04 OSCILLATION LIMIT = 36.32
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3238

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5641E-01
 HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .3235 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 599
 *** TIME = .190924E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4639E-04 OSCILLATION LIMIT = 36.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3235
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5733E-01
 HT FLOW CONVERGENCE VALUE= .1461E-01 CRITERION= .3234 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 600
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4608E-04 OSCILLATION LIMIT = 36.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3234
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5652E-01
 HT FLOW CONVERGENCE VALUE= .1445E-01 CRITERION= .3231 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 601
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4636E-04 OSCILLATION LIMIT = 36.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3231
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5724E-01
 HT FLOW CONVERGENCE VALUE= .1458E-01 CRITERION= .3230 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 602
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4610E-04 OSCILLATION LIMIT = 36.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3230
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5662E-01
 HT FLOW CONVERGENCE VALUE= .1445E-01 CRITERION= .3227 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 603
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4634E-04 OSCILLATION LIMIT = 36.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3227
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5718E-01
 HT FLOW CONVERGENCE VALUE= .1454E-01 CRITERION= .3226 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 604
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4611E-04 OSCILLATION LIMIT = 36.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3226
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5670E-01
 HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .3223 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 605
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4631E-04 OSCILLATION LIMIT = 36.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3223
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5714E-01
 HT FLOW CONVERGENCE VALUE= .1452E-01 CRITERION= .3222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 606
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4612E-04 OSCILLATION LIMIT = 36.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3222
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5676E-01
 HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .3219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 607
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4630E-04 OSCILLATION LIMIT = 36.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5711E-01
 HT FLOW CONVERGENCE VALUE= .1449E-01 CRITERION= .3219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 608
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4612E-04 OSCILLATION LIMIT = 36.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5681E-01
 HT FLOW CONVERGENCE VALUE= .1442E-01 CRITERION= .3216 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 609
 *** TIME = .198813E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4628E-04 OSCILLATION LIMIT = 36.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3216
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5709E-01
 HT FLOW CONVERGENCE VALUE= .1446E-01 CRITERION= .3215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 610
 *** TIME = .199602E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4613E-04 OSCILLATION LIMIT = 36.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.256 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5685E-01
 HT FLOW CONVERGENCE VALUE= .1441E-01 CRITERION= .3212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 611
 *** TIME = .200391E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4627E-04 OSCILLATION LIMIT = 36.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3212
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5707E-01
 HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .3211 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 612
 *** TIME = .201180E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4613E-04 OSCILLATION LIMIT = 36.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.257 CRITERION= .3211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5688E-01
 HT FLOW CONVERGENCE VALUE= .1439E-01 CRITERION= .3208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 613
 *** TIME = .201969E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4626E-04 OSCILLATION LIMIT = 36.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.553 CRITERION= .3208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5707E-01
 HT FLOW CONVERGENCE VALUE= .1442E-01 CRITERION= .3207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 614
 *** TIME = .202758E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .4613E-04  OSCILLATION LIMIT = 36.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.257  CRITERION= .3207
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5691E-01
  HT FLOW CONVERGENCE VALUE= .1437E-01 CRITERION= .3204  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 615
*** TIME = .203547E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4626E-04  OSCILLATION LIMIT = 36.49
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.553  CRITERION= .3204
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5706E-01
  HT FLOW CONVERGENCE VALUE= .1439E-01 CRITERION= .3203  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 616
*** TIME = .204335E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4613E-04  OSCILLATION LIMIT = 36.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.257  CRITERION= .3203
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5693E-01
  HT FLOW CONVERGENCE VALUE= .1436E-01 CRITERION= .3200  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 617
*** TIME = .205124E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4625E-04  OSCILLATION LIMIT = 36.49
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.554  CRITERION= .3200
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5707E-01
  HT FLOW CONVERGENCE VALUE= .1438E-01 CRITERION= .3199  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 618
*** TIME = .205913E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4612E-04  OSCILLATION LIMIT = 36.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.257  CRITERION= .3200
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5696E-01
  HT FLOW CONVERGENCE VALUE= .1435E-01 CRITERION= .3197  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 619
*** TIME = .206702E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4624E-04  OSCILLATION LIMIT = 36.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.554  CRITERION= .3197
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5707E-01
  HT FLOW CONVERGENCE VALUE= .1436E-01 CRITERION= .3196  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 620
*** TIME = .207491E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4612E-04  OSCILLATION LIMIT = 36.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.257  CRITERION= .3196
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5698E-01
  HT FLOW CONVERGENCE VALUE= .1433E-01 CRITERION= .3193  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 621
*** TIME = .208280E+09  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4623E-04  OSCILLATION LIMIT = 36.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 3.554  CRITERION= .3193
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5708E-01
  HT FLOW CONVERGENCE VALUE= .1435E-01 CRITERION= .3192  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 622
*** TIME = .209069E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4612E-04 OSCILLATION LIMIT = 36.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.257 CRITERION= .3192
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5699E-01
HT FLOW CONVERGENCE VALUE= .1432E-01 CRITERION= .3189 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 623
*** TIME = .209858E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4623E-04 OSCILLATION LIMIT = 36.47
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3189
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5708E-01
HT FLOW CONVERGENCE VALUE= .1433E-01 CRITERION= .3188 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 624
*** TIME = .210647E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4612E-04 OSCILLATION LIMIT = 36.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.257 CRITERION= .3188
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5701E-01
HT FLOW CONVERGENCE VALUE= .1430E-01 CRITERION= .3185 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 625
*** TIME = .211436E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4622E-04 OSCILLATION LIMIT = 36.47
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3185
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5709E-01
HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .3184 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 626
*** TIME = .212225E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4611E-04 OSCILLATION LIMIT = 36.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3184
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5703E-01
HT FLOW CONVERGENCE VALUE= .1428E-01 CRITERION= .3181 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 627
*** TIME = .213014E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4622E-04 OSCILLATION LIMIT = 36.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3181
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5710E-01
HT FLOW CONVERGENCE VALUE= .1430E-01 CRITERION= .3180 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 628
*** TIME = .213803E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4611E-04 OSCILLATION LIMIT = 36.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3181
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5704E-01
HT FLOW CONVERGENCE VALUE= .1427E-01 CRITERION= .3178 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 629
*** TIME = .214592E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4621E-04 OSCILLATION LIMIT = 36.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3178
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5711E-01

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HT FLOW CONVERGENCE VALUE= .1428E-01 CRITERION= .3177 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 630
 *** TIME = .215381E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4611E-04 OSCILLATION LIMIT = 36.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5706E-01
 HT FLOW CONVERGENCE VALUE= .1426E-01 CRITERION= .3174 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 631
 *** TIME = .216170E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4621E-04 OSCILLATION LIMIT = 36.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5712E-01
 HT FLOW CONVERGENCE VALUE= .1427E-01 CRITERION= .3173 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 632
 *** TIME = .216959E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4610E-04 OSCILLATION LIMIT = 36.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5707E-01
 HT FLOW CONVERGENCE VALUE= .1425E-01 CRITERION= .3170 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 633
 *** TIME = .217747E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4620E-04 OSCILLATION LIMIT = 36.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5713E-01
 HT FLOW CONVERGENCE VALUE= .1426E-01 CRITERION= .3169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 634
 *** TIME = .218536E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4610E-04 OSCILLATION LIMIT = 36.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5709E-01
 HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .3166 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 635
 *** TIME = .219325E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4620E-04 OSCILLATION LIMIT = 36.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.554 CRITERION= .3166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5714E-01
 HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 636
 *** TIME = .220114E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4609E-04 OSCILLATION LIMIT = 36.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.258 CRITERION= .3165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5710E-01
 HT FLOW CONVERGENCE VALUE= .1421E-01 CRITERION= .3162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 637
 *** TIME = .220903E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4619E-04 OSCILLATION LIMIT = 36.44

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:04:33 JUN 19, 1995 CP= 34971.100
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 3.971 CRITERION= .3162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5165E-01
 HT FLOW CONVERGENCE VALUE= .1286E-01 CRITERION= .3162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 638
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4944E-04 OSCILLATION LIMIT = 39.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5154E-01
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3159 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 639
 *** TIME = .222481E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4970E-04 OSCILLATION LIMIT = 39.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.971 CRITERION= .3159
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5233E-01
 HT FLOW CONVERGENCE VALUE= .1293E-01 CRITERION= .3158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 640
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4929E-04 OSCILLATION LIMIT = 38.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3158
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5159E-01
 HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3155 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 641
 *** TIME = .224059E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4967E-04 OSCILLATION LIMIT = 39.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5225E-01
 HT FLOW CONVERGENCE VALUE= .1290E-01 CRITERION= .3154 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 642
 *** TIME = .224848E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4931E-04 OSCILLATION LIMIT = 38.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5169E-01
 HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3152 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 643
 *** TIME = .225637E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4963E-04 OSCILLATION LIMIT = 39.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3152
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5218E-01
 HT FLOW CONVERGENCE VALUE= .1285E-01 CRITERION= .3151 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 644
 *** TIME = .226426E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4933E-04 OSCILLATION LIMIT = 38.92

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5176E-01
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3148 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 645
 *** TIME = .227215E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4961E-04 OSCILLATION LIMIT = 39.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3148
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5214E-01
 HT FLOW CONVERGENCE VALUE= .1283E-01 CRITERION= .3147 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 646
 *** TIME = .228004E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4934E-04 OSCILLATION LIMIT = 38.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3147
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5182E-01
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3145 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 647
 *** TIME = .228793E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4959E-04 OSCILLATION LIMIT = 39.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3145
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5211E-01
 HT FLOW CONVERGENCE VALUE= .1281E-01 CRITERION= .3144 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 648
 *** TIME = .229582E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4935E-04 OSCILLATION LIMIT = 38.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.676 CRITERION= .3144
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5187E-01
 HT FLOW CONVERGENCE VALUE= .1273E-01 CRITERION= .3141 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 12 COMPLETED. CUM ITER = 649
 *** TIME = .230371E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4957E-04 OSCILLATION LIMIT = 39.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3141
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5209E-01
 HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 13 COMPLETED. CUM ITER = 650
 *** TIME = .231159E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4936E-04 OSCILLATION LIMIT = 38.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.677 CRITERION= .3140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5190E-01
 HT FLOW CONVERGENCE VALUE= .1273E-01 CRITERION= .3137 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 14 COMPLETED. CUM ITER = 651
 *** TIME = .231948E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4956E-04 OSCILLATION LIMIT = 39.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3138
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5207E-01
 HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3137 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 15 COMPLETED. CUM ITER = 652

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*** TIME = .232737E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04    OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.677    CRITERION= .3137
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5193E-01
    HT FLOW CONVERGENCE VALUE= .1273E-01    CRITERION= .3134    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 16 COMPLETED. CUM ITER = 653
*** TIME = .233526E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4955E-04    OSCILLATION LIMIT = 39.09
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.972    CRITERION= .3134
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5207E-01
    HT FLOW CONVERGENCE VALUE= .1277E-01    CRITERION= .3133    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 17 COMPLETED. CUM ITER = 654
*** TIME = .234315E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04    OSCILLATION LIMIT = 38.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.677    CRITERION= .3133
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5196E-01
    HT FLOW CONVERGENCE VALUE= .1272E-01    CRITERION= .3130    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 18 COMPLETED. CUM ITER = 655
*** TIME = .235104E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4954E-04    OSCILLATION LIMIT = 39.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.972    CRITERION= .3130
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5206E-01
    HT FLOW CONVERGENCE VALUE= .1276E-01    CRITERION= .3130    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 656
*** TIME = .235893E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04    OSCILLATION LIMIT = 38.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.677    CRITERION= .3130
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5198E-01
    HT FLOW CONVERGENCE VALUE= .1271E-01    CRITERION= .3127    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 657
*** TIME = .236682E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4953E-04    OSCILLATION LIMIT = 39.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.972    CRITERION= .3127
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5206E-01
    HT FLOW CONVERGENCE VALUE= .1274E-01    CRITERION= .3126    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 658
*** TIME = .237471E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04    OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.677    CRITERION= .3126
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5200E-01
    HT FLOW CONVERGENCE VALUE= .1269E-01    CRITERION= .3123    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 659
*** TIME = .238260E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4952E-04    OSCILLATION LIMIT = 39.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 3.972    CRITERION= .3123
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5207E-01
    HT FLOW CONVERGENCE VALUE= .1271E-01    CRITERION= .3122    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 660
*** TIME = .239049E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04 OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.677 CRITERION= .3123
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5202E-01
HT FLOW CONVERGENCE VALUE= .1267E-01 CRITERION= .3120 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 661
*** TIME = .239838E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4952E-04 OSCILLATION LIMIT = 39.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3120
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5207E-01
HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3119 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 662
*** TIME = .240627E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04 OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.677 CRITERION= .3119
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5203E-01
HT FLOW CONVERGENCE VALUE= .1266E-01 CRITERION= .3116 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 663
*** TIME = .241416E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4951E-04 OSCILLATION LIMIT = 39.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3116
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5208E-01
HT FLOW CONVERGENCE VALUE= .1269E-01 CRITERION= .3115 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 664
*** TIME = .242205E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4936E-04 OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3115
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5204E-01
HT FLOW CONVERGENCE VALUE= .1265E-01 CRITERION= .3113 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 665
*** TIME = .242994E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4950E-04 OSCILLATION LIMIT = 39.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.972 CRITERION= .3113
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5209E-01
HT FLOW CONVERGENCE VALUE= .1267E-01 CRITERION= .3112 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 666
*** TIME = .243782E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4935E-04 OSCILLATION LIMIT = 38.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3112
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5206E-01
HT FLOW CONVERGENCE VALUE= .1263E-01 CRITERION= .3109 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 667
*** TIME = .244571E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4950E-04 OSCILLATION LIMIT = 39.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.973 CRITERION= .3109

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5209E-01
HT FLOW CONVERGENCE VALUE= .1265E-01 CRITERION= .3108 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 668
*** TIME = .245360E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4935E-04 OSCILLATION LIMIT = 38.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3108
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5207E-01
HT FLOW CONVERGENCE VALUE= .1262E-01 CRITERION= .3105 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 669
*** TIME = .246149E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4949E-04 OSCILLATION LIMIT = 39.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.973 CRITERION= .3106
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5210E-01
HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .3105 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 670
*** TIME = .246938E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4934E-04 OSCILLATION LIMIT = 38.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3105
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5208E-01
HT FLOW CONVERGENCE VALUE= .1261E-01 CRITERION= .3102 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 671
*** TIME = .247727E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4949E-04 OSCILLATION LIMIT = 39.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.973 CRITERION= .3102
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5211E-01
HT FLOW CONVERGENCE VALUE= .1263E-01 CRITERION= .3101 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 672
*** TIME = .248516E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4934E-04 OSCILLATION LIMIT = 38.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3101
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5209E-01
HT FLOW CONVERGENCE VALUE= .1260E-01 CRITERION= .3098 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 673
*** TIME = .249305E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4948E-04 OSCILLATION LIMIT = 39.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.973 CRITERION= .3099
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5212E-01
HT FLOW CONVERGENCE VALUE= .1262E-01 CRITERION= .3098 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 674
*** TIME = .250094E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4934E-04 OSCILLATION LIMIT = 38.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.678 CRITERION= .3098
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5210E-01
HT FLOW CONVERGENCE VALUE= .1258E-01 CRITERION= .3095 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 675
*** TIME = .250883E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4948E-04 OSCILLATION LIMIT = 39.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 3.973 CRITERION= .3095
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5213E-01
 HT FLOW CONVERGENCE VALUE= .1260E-01 CRITERION= .3094 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 676
 *** TIME = .251672E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4933E-04 OSCILLATION LIMIT = 38.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.679 CRITERION= .3094
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5211E-01
 HT FLOW CONVERGENCE VALUE= .1256E-01 CRITERION= .3091 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 677
 *** TIME = .252461E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4947E-04 OSCILLATION LIMIT = 39.03

***** ANSYS. SOLVE COMMAND. *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:41:30 JUN 19, 1995 CP= 37162.240
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3091
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6498E-01
 HT FLOW CONVERGENCE VALUE= .1917E-01 CRITERION= .3091 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 678
 *** TIME = .253250E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2152E-04 OSCILLATION LIMIT = 16.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.551 CRITERION= .3091
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6425E-01
 HT FLOW CONVERGENCE VALUE= .1897E-01 CRITERION= .3088 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 679
 *** TIME = .254039E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2150E-04 OSCILLATION LIMIT = 16.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6193E-01
 HT FLOW CONVERGENCE VALUE= .1830E-01 CRITERION= .3087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 680
 *** TIME = .254828E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2124E-04 OSCILLATION LIMIT = 16.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.551 CRITERION= .3087
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6427E-01
 HT FLOW CONVERGENCE VALUE= .1889E-01 CRITERION= .3085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 681
 *** TIME = .255617E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2150E-04 OSCILLATION LIMIT = 16.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3085
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6227E-01
 HT FLOW CONVERGENCE VALUE= .1837E-01 CRITERION= .3084 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 682
 *** TIME = .256406E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2129E-04 OSCILLATION LIMIT = 16.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.551 CRITERION= .3084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6398E-01
 HT FLOW CONVERGENCE VALUE= .1881E-01 CRITERION= .3081 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 683
 *** TIME = .257194E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2146E-04 OSCILLATION LIMIT = 16.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3081
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6254E-01
 HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3081 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 684
 *** TIME = .257983E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2132E-04 OSCILLATION LIMIT = 16.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.551 CRITERION= .3081
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6377E-01
 HT FLOW CONVERGENCE VALUE= .1876E-01 CRITERION= .3078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 685
 *** TIME = .258772E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2143E-04 OSCILLATION LIMIT = 16.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6275E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3077 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 686
 *** TIME = .259561E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3077
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6362E-01
 HT FLOW CONVERGENCE VALUE= .1871E-01 CRITERION= .3075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 687
 *** TIME = .260350E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6291E-01
 HT FLOW CONVERGENCE VALUE= .1845E-01 CRITERION= .3074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 688
 *** TIME = .261139E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2136E-04 OSCILLATION LIMIT = 16.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6351E-01
 HT FLOW CONVERGENCE VALUE= .1864E-01 CRITERION= .3071 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 689
 *** TIME = .261928E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2139E-04 OSCILLATION LIMIT = 16.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6303E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3071 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 690
 *** TIME = .262717E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2138E-04 OSCILLATION LIMIT = 16.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6343E-01
 HT FLOW CONVERGENCE VALUE= .1863E-01 CRITERION= .3068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 691
 *** TIME = .263506E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2138E-04 OSCILLATION LIMIT = 16.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.255 CRITERION= .3068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6312E-01
 HT FLOW CONVERGENCE VALUE= .1847E-01 CRITERION= .3067 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 692
 *** TIME = .264295E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2139E-04 OSCILLATION LIMIT = 16.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6338E-01
 HT FLOW CONVERGENCE VALUE= .1859E-01 CRITERION= .3065 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 693
 *** TIME = .265084E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2137E-04 OSCILLATION LIMIT = 16.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3065
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6320E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 694
 *** TIME = .265873E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2139E-04 OSCILLATION LIMIT = 16.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3064
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6335E-01
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .3061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 695
 *** TIME = .266662E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2136E-04 OSCILLATION LIMIT = 16.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6325E-01
 HT FLOW CONVERGENCE VALUE= .1845E-01 CRITERION= .3061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 696
 *** TIME = .267451E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2140E-04 OSCILLATION LIMIT = 16.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6333E-01
 HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .3058 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 697
 *** TIME = .268240E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2136E-04 OSCILLATION LIMIT = 16.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3058
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6330E-01

HT FLOW CONVERGENCE VALUE= .1843E-01 CRITERION= .3057 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 698
 *** TIME = .269029E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2140E-04 OSCILLATION LIMIT = 16.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.550 CRITERION= .3058
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6332E-01
 HT FLOW CONVERGENCE VALUE= .1850E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 699
 *** TIME = .269818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2135E-04 OSCILLATION LIMIT = 16.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6334E-01
 HT FLOW CONVERGENCE VALUE= .1842E-01 CRITERION= .3054 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 700
 *** TIME = .270606E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2140E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6331E-01
 HT FLOW CONVERGENCE VALUE= .1848E-01 CRITERION= .3052 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 701
 *** TIME = .271395E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2135E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6337E-01
 HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 702
 *** TIME = .272184E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6331E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 703
 *** TIME = .272973E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2135E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6339E-01
 HT FLOW CONVERGENCE VALUE= .1840E-01 CRITERION= .3048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 704
 *** TIME = .273762E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6332E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 705
 *** TIME = .274551E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2135E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6342E-01
 HT FLOW CONVERGENCE VALUE= .1838E-01 CRITERION= .3044 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 706
 *** TIME = .275340E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3044
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6333E-01
 HT FLOW CONVERGENCE VALUE= .1840E-01 CRITERION= .3042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 707
 *** TIME = .276129E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6344E-01
 HT FLOW CONVERGENCE VALUE= .1835E-01 CRITERION= .3041 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 708
 *** TIME = .276918E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6334E-01
 HT FLOW CONVERGENCE VALUE= .1838E-01 CRITERION= .3038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 32 COMPLETED. CUM ITER = 709
 *** TIME = .277707E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6346E-01
 HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .3038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 33 COMPLETED. CUM ITER = 710
 *** TIME = .278496E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6336E-01
 HT FLOW CONVERGENCE VALUE= .1833E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 34 COMPLETED. CUM ITER = 711
 *** TIME = .279285E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6348E-01
 HT FLOW CONVERGENCE VALUE= .1829E-01 CRITERION= .3034 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 35 COMPLETED. CUM ITER = 712
 *** TIME = .280074E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.549 CRITERION= .3034
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6337E-01
 HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .3032 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 36 COMPLETED. CUM ITER = 713
 *** TIME = .280863E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3032
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6349E-01
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .3031 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 37 COMPLETED. CUM ITER = 714

*** TIME = .281652E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.548 CRITERION= .3031
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6339E-01
HT FLOW CONVERGENCE VALUE= .1828E-01 CRITERION= .3028 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 38 COMPLETED. CUM ITER = 715

*** TIME = .282441E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.254 CRITERION= .3029
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6351E-01
HT FLOW CONVERGENCE VALUE= .1823E-01 CRITERION= .3028 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 716

*** TIME = .283229E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2141E-04 OSCILLATION LIMIT = 16.89

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 3.548 CRITERION= .3028
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6341E-01
HT FLOW CONVERGENCE VALUE= .1826E-01 CRITERION= .3025 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 717

*** TIME = .284018E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .2134E-04 OSCILLATION LIMIT = 16.84

Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09

TIME= .31558E+09

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP

VALUES= 115.63 .00000E+00 EXPANSION KEY=1

CONSTRAINT AT KEYPOINT 10

LOAD LABELS = TEMP
VALUES = 116.58 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 118.80 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 39353.440 TIME= 23:18:28
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 23:18:28 JUN 19, 1995 CP= 39353.440
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
TIME AT END OF THE LOAD STEP.31558E+09
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3025
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5060E-01
HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .3025 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 718
*** TIME = .284807E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2454E-04 OSCILLATION LIMIT = 19.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3025
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5025E-01
HT FLOW CONVERGENCE VALUE= .1391E-01 CRITERION= .3022 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 719
*** TIME = .285596E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2439E-04 OSCILLATION LIMIT = 19.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3022
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5217E-01
HT FLOW CONVERGENCE VALUE= .1429E-01 CRITERION= .3022 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 720
 *** TIME = .286385E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2467E-04 OSCILLATION LIMIT = 19.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5037E-01
 HT FLOW CONVERGENCE VALUE= .1393E-01 CRITERION= .3020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 721
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2440E-04 OSCILLATION LIMIT = 19.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3020
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5195E-01
 HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .3019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 722
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2465E-04 OSCILLATION LIMIT = 19.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5059E-01
 HT FLOW CONVERGENCE VALUE= .1395E-01 CRITERION= .3017 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 723
 *** TIME = .288752E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2442E-04 OSCILLATION LIMIT = 19.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5178E-01
 HT FLOW CONVERGENCE VALUE= .1417E-01 CRITERION= .3016 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 724
 *** TIME = .289541E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2463E-04 OSCILLATION LIMIT = 19.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3016
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5076E-01
 HT FLOW CONVERGENCE VALUE= .1397E-01 CRITERION= .3014 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 725
 *** TIME = .290330E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2444E-04 OSCILLATION LIMIT = 19.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5166E-01
 HT FLOW CONVERGENCE VALUE= .1413E-01 CRITERION= .3014 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 726
 *** TIME = .291119E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2461E-04 OSCILLATION LIMIT = 19.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5089E-01
 HT FLOW CONVERGENCE VALUE= .1398E-01 CRITERION= .3011 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 727
 *** TIME = .291908E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2445E-04 OSCILLATION LIMIT = 19.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3011
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5157E-01

HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .3011 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 728
 *** TIME = .292697E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 19.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3011
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5098E-01
 HT FLOW CONVERGENCE VALUE= .1399E-01 CRITERION= .3008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 729
 *** TIME = .293486E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2446E-04 OSCILLATION LIMIT = 19.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5151E-01
 HT FLOW CONVERGENCE VALUE= .1408E-01 CRITERION= .3008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 730
 *** TIME = .294275E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3008
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5106E-01
 HT FLOW CONVERGENCE VALUE= .1399E-01 CRITERION= .3006 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 731
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3006
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5146E-01
 HT FLOW CONVERGENCE VALUE= .1406E-01 CRITERION= .3005 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 732
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5112E-01
 HT FLOW CONVERGENCE VALUE= .1399E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 733
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5143E-01
 HT FLOW CONVERGENCE VALUE= .1403E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 734
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5116E-01
 HT FLOW CONVERGENCE VALUE= .1398E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 735
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5141E-01
 HT FLOW CONVERGENCE VALUE= .1401E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 736
 *** TIME = .299008E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5121E-01
 HT FLOW CONVERGENCE VALUE= .1397E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 20 COMPLETED. CUM ITER = 737
 *** TIME = .299797E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139E-01
 HT FLOW CONVERGENCE VALUE= .1399E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 21 COMPLETED. CUM ITER = 738
 *** TIME = .300586E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5124E-01
 HT FLOW CONVERGENCE VALUE= .1396E-01 CRITERION= .2995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 22 COMPLETED. CUM ITER = 739
 *** TIME = .301375E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2995
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139E-01
 HT FLOW CONVERGENCE VALUE= .1398E-01 CRITERION= .2994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 23 COMPLETED. CUM ITER = 740
 *** TIME = .302164E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.072 CRITERION= .2994
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5126E-01
 HT FLOW CONVERGENCE VALUE= .1396E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 24 COMPLETED. CUM ITER = 741
 *** TIME = .302953E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5138E-01
 HT FLOW CONVERGENCE VALUE= .1397E-01 CRITERION= .2991 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 25 COMPLETED. CUM ITER = 742
 *** TIME = .303742E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2991
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5129E-01
 HT FLOW CONVERGENCE VALUE= .1395E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 26 COMPLETED. CUM ITER = 743
 *** TIME = .304531E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139E-01
 HT FLOW CONVERGENCE VALUE= .1395E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 744
 *** TIME = .305320E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5130E-01
 HT FLOW CONVERGENCE VALUE= .1393E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 745
 *** TIME = .306109E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139E-01
 HT FLOW CONVERGENCE VALUE= .1394E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 746
 *** TIME = .306898E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5132E-01
 HT FLOW CONVERGENCE VALUE= .1392E-01 CRITERION= .2984 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 747
 *** TIME = .307687E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2984
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139E-01
 HT FLOW CONVERGENCE VALUE= .1393E-01 CRITERION= .2983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 31 COMPLETED. CUM ITER = 748
 *** TIME = .308476E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5134E-01
 HT FLOW CONVERGENCE VALUE= .1392E-01 CRITERION= .2981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 32 COMPLETED. CUM ITER = 749
 *** TIME = .309265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5140E-01
 HT FLOW CONVERGENCE VALUE= .1392E-01 CRITERION= .2980 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 33 COMPLETED. CUM ITER = 750
 *** TIME = .310053E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2455E-04 OSCILLATION LIMIT = 19.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2980
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5135E-01
 HT FLOW CONVERGENCE VALUE= .1391E-01 CRITERION= .2978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 34 COMPLETED. CUM ITER = 751

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*** TIME = .310842E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2978
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5141E-01
HT FLOW CONVERGENCE VALUE= .1391E-01 CRITERION= .2978 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 35 COMPLETED. CUM ITER = 752
*** TIME = .311631E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2455E-04 OSCILLATION LIMIT = 19.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2978
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5137E-01
HT FLOW CONVERGENCE VALUE= .1390E-01 CRITERION= .2975 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 36 COMPLETED. CUM ITER = 753
*** TIME = .312420E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2975
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5142E-01
HT FLOW CONVERGENCE VALUE= .1390E-01 CRITERION= .2975 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 37 COMPLETED. CUM ITER = 754
*** TIME = .313209E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2455E-04 OSCILLATION LIMIT = 19.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2975
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5138E-01
HT FLOW CONVERGENCE VALUE= .1389E-01 CRITERION= .2972 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 755
*** TIME = .313998E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 1.779 CRITERION= .2972
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5143E-01
HT FLOW CONVERGENCE VALUE= .1389E-01 CRITERION= .2972 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 756
*** TIME = .314787E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2455E-04 OSCILLATION LIMIT = 19.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 2.071 CRITERION= .2972
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5140E-01
HT FLOW CONVERGENCE VALUE= .1388E-01 CRITERION= .2970 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 757
*** TIME = .315576E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:55:29 JUN 19, 1995 CP= 41546.010
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 20.77 CRITERION= .2976

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5356
 HT FLOW CONVERGENCE VALUE= .1374 CRITERION= .2958 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 758
 *** TIME = .323465E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2370E-04 OSCILLATION LIMIT = 187.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.06 CRITERION= .2965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4820
 HT FLOW CONVERGENCE VALUE= .1316 CRITERION= .2944 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 759
 *** TIME = .331355E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2289E-04 OSCILLATION LIMIT = 180.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.76 CRITERION= .2951
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4856
 HT FLOW CONVERGENCE VALUE= .1313 CRITERION= .2932 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 760
 *** TIME = .339244E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2293E-04 OSCILLATION LIMIT = 180.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.06 CRITERION= .2939
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4865
 HT FLOW CONVERGENCE VALUE= .1309 CRITERION= .2918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 761
 *** TIME = .347134E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2293E-04 OSCILLATION LIMIT = 180.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.76 CRITERION= .2925
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4863
 HT FLOW CONVERGENCE VALUE= .1306 CRITERION= .2906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 762
 *** TIME = .355023E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2292E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.05 CRITERION= .2913
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4874
 HT FLOW CONVERGENCE VALUE= .1303 CRITERION= .2892 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 763
 *** TIME = .362912E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2292E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.76 CRITERION= .2899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4873
 HT FLOW CONVERGENCE VALUE= .1296 CRITERION= .2880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 764
 *** TIME = .370802E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2292E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.05 CRITERION= .2887
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4884
 HT FLOW CONVERGENCE VALUE= .1294 CRITERION= .2866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 765
 *** TIME = .378691E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2292E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.75 CRITERION= .2873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4883
 HT FLOW CONVERGENCE VALUE= .1288 CRITERION= .2855 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 766
 *** TIME = .386581E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2292E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.04 CRITERION= .2862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4894
 HT FLOW CONVERGENCE VALUE= .1281 CRITERION= .2841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 767
 *** TIME = .394470E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2291E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.75 CRITERION= .2848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4893
 HT FLOW CONVERGENCE VALUE= .1280 CRITERION= .2829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 768
 *** TIME = .402359E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2291E-04 OSCILLATION LIMIT = 180.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.04 CRITERION= .2836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4904
 HT FLOW CONVERGENCE VALUE= .1277 CRITERION= .2815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 769
 *** TIME = .410249E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2291E-04 OSCILLATION LIMIT = 180.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.75 CRITERION= .2822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4903
 HT FLOW CONVERGENCE VALUE= .1271 CRITERION= .2803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 770
 *** TIME = .418138E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2291E-04 OSCILLATION LIMIT = 180.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.04 CRITERION= .2810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4914
 HT FLOW CONVERGENCE VALUE= .1268 CRITERION= .2789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 771
 *** TIME = .426028E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2291E-04 OSCILLATION LIMIT = 180.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.74 CRITERION= .2796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4913
 HT FLOW CONVERGENCE VALUE= .1263 CRITERION= .2777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 772
 *** TIME = .433917E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2290E-04 OSCILLATION LIMIT = 180.7
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.03 CRITERION= .2784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4924
 HT FLOW CONVERGENCE VALUE= .1259 CRITERION= .2763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 773
 *** TIME = .441806E+09 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .2290E-04  OSCILLATION LIMIT = 180.7
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.74      CRITERION= .2770
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4923
  HT FLOW CONVERGENCE VALUE= .1252      CRITERION= .2751    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  17 COMPLETED.  CUM ITER =  774
*** TIME = .449696E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2290E-04  OSCILLATION LIMIT = 180.7
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 21.03      CRITERION= .2759
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4933
  HT FLOW CONVERGENCE VALUE= .1249      CRITERION= .2737    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  18 COMPLETED.  CUM ITER =  775
*** TIME = .457585E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2290E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.73      CRITERION= .2745
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4932
  HT FLOW CONVERGENCE VALUE= .1243      CRITERION= .2725    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  19 COMPLETED.  CUM ITER =  776
*** TIME = .465475E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2289E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 21.03      CRITERION= .2733
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4943
  HT FLOW CONVERGENCE VALUE= .1239      CRITERION= .2711    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  20 COMPLETED.  CUM ITER =  777
*** TIME = .473364E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2289E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.73      CRITERION= .2719
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4942
  HT FLOW CONVERGENCE VALUE= .1233      CRITERION= .2699    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  21 COMPLETED.  CUM ITER =  778
*** TIME = .481253E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2289E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 21.02      CRITERION= .2707
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4953
  HT FLOW CONVERGENCE VALUE= .1227      CRITERION= .2686    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  22 COMPLETED.  CUM ITER =  779
*** TIME = .489143E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2289E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 20.73      CRITERION= .2693
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4953
  HT FLOW CONVERGENCE VALUE= .1221      CRITERION= .2674    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1
*** LOAD STEP  23  SUBSTEP  23 COMPLETED.  CUM ITER =  780
*** TIME = .497032E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2289E-04  OSCILLATION LIMIT = 180.6
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 21.02      CRITERION= .2681
  EQUIL ITER  1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -.4963
  HT FLOW CONVERGENCE VALUE= .1216      CRITERION= .2660    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  1

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*** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 781
 *** TIME = .504922E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2667
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4963
 HT FLOW CONVERGENCE VALUE= .1209 CRITERION= .2648 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 782
 *** TIME = .512811E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .2655
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4974
 HT FLOW CONVERGENCE VALUE= .1204 CRITERION= .2634 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 783
 *** TIME = .520700E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2641
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4974
 HT FLOW CONVERGENCE VALUE= .1197 CRITERION= .2622 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 784
 *** TIME = .528590E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .2630
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4985
 HT FLOW CONVERGENCE VALUE= .1193 CRITERION= .2608 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 785
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.72 CRITERION= .2616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4985
 HT FLOW CONVERGENCE VALUE= .1188 CRITERION= .2596 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 786
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2288E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .2604
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4995
 HT FLOW CONVERGENCE VALUE= .1183 CRITERION= .2582 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 787
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2287E-04 OSCILLATION LIMIT = 180.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.71 CRITERION= .2590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4995
 HT FLOW CONVERGENCE VALUE= .1176 CRITERION= .2570 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 788
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2287E-04 OSCILLATION LIMIT = 180.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .2578
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5005

HT FLOW CONVERGENCE VALUE= .1174 CRITERION= .2556 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 789
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2287E-04 OSCILLATION LIMIT = 180.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.71 CRITERION= .2564
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5006
 HT FLOW CONVERGENCE VALUE= .1166 CRITERION= .2544 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 790
 *** TIME = .575926E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2287E-04 OSCILLATION LIMIT = 180.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .2552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5016
 HT FLOW CONVERGENCE VALUE= .1164 CRITERION= .2530 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 791
 *** TIME = .583816E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2286E-04 OSCILLATION LIMIT = 180.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.70 CRITERION= .2538
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5016
 HT FLOW CONVERGENCE VALUE= .1158 CRITERION= .2518 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 792
 *** TIME = .591705E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2286E-04 OSCILLATION LIMIT = 180.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .2526
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5026
 HT FLOW CONVERGENCE VALUE= .1153 CRITERION= .2504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 793
 *** TIME = .599594E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2286E-04 OSCILLATION LIMIT = 180.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.70 CRITERION= .2512
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5027
 HT FLOW CONVERGENCE VALUE= .1147 CRITERION= .2492 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 794
 *** TIME = .607484E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2286E-04 OSCILLATION LIMIT = 180.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.99 CRITERION= .2500
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5037
 HT FLOW CONVERGENCE VALUE= .1142 CRITERION= .2478 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 795
 *** TIME = .615373E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2285E-04 OSCILLATION LIMIT = 180.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.70 CRITERION= .2486
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5038
 HT FLOW CONVERGENCE VALUE= .1137 CRITERION= .2466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 796
 *** TIME = .623263E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2285E-04 OSCILLATION LIMIT = 180.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 20.99      CRITERION= .2475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5048
HT FLOW CONVERGENCE VALUE= .1133      CRITERION= .2452    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 797
*** TIME = .631152E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2285E-04 OSCILLATION LIMIT = 180.3

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX 00:32:31 JUN 20, 1995 CP= 43739.680
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 29.64      CRITERION= .2470
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4009
HT FLOW CONVERGENCE VALUE= .9912E-01 CRITERION= .2444    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 798
*** TIME = .639041E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1718E-04 OSCILLATION LIMIT = 135.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 29.93      CRITERION= .2461
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4074
HT FLOW CONVERGENCE VALUE= .9856E-01 CRITERION= .2433    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 799
*** TIME = .646931E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1729E-04 OSCILLATION LIMIT = 136.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 29.63      CRITERION= .2451
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4086
HT FLOW CONVERGENCE VALUE= .9806E-01 CRITERION= .2424    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 800
*** TIME = .654820E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1733E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 29.92      CRITERION= .2442
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4079
HT FLOW CONVERGENCE VALUE= .9791E-01 CRITERION= .2414    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 801
*** TIME = .662710E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1729E-04 OSCILLATION LIMIT = 136.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 29.62      CRITERION= .2431
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4094
HT FLOW CONVERGENCE VALUE= .9764E-01 CRITERION= .2405    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 802
*** TIME = .670599E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1733E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 29.91      CRITERION= .2423
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4087
HT FLOW CONVERGENCE VALUE= .9705E-01 CRITERION= .2394    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 803
*** TIME = .678488E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1730E-04 OSCILLATION LIMIT = 136.5

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.62 CRITERION= .2412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4101
 HT FLOW CONVERGENCE VALUE= .9663E-01 CRITERION= .2386 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 804
 *** TIME = .686378E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.90 CRITERION= .2404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4094
 HT FLOW CONVERGENCE VALUE= .9594E-01 CRITERION= .2375 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 805
 *** TIME = .694267E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1730E-04 OSCILLATION LIMIT = 136.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .2393
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4108
 HT FLOW CONVERGENCE VALUE= .9595E-01 CRITERION= .2366 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 806
 *** TIME = .702157E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.90 CRITERION= .2384
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4101
 HT FLOW CONVERGENCE VALUE= .9557E-01 CRITERION= .2356 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 807
 *** TIME = .710046E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1730E-04 OSCILLATION LIMIT = 136.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .2374
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4115
 HT FLOW CONVERGENCE VALUE= .9532E-01 CRITERION= .2347 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 808
 *** TIME = .717935E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.89 CRITERION= .2365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4109
 HT FLOW CONVERGENCE VALUE= .9489E-01 CRITERION= .2336 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 809
 *** TIME = .725825E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1731E-04 OSCILLATION LIMIT = 136.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.59 CRITERION= .2355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4123
 HT FLOW CONVERGENCE VALUE= .9445E-01 CRITERION= .2328 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 810
 *** TIME = .733714E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.88 CRITERION= .2346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4117
 HT FLOW CONVERGENCE VALUE= .9419E-01 CRITERION= .2317 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 811

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*** TIME = .741604E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1731E-04    OSCILLATION LIMIT = 136.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.59    CRITERION= .2335
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4130
    HT FLOW CONVERGENCE VALUE= .9383E-01    CRITERION= .2308    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 812
*** TIME = .749493E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1734E-04    OSCILLATION LIMIT = 136.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.87    CRITERION= .2327
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4125
    HT FLOW CONVERGENCE VALUE= .9337E-01    CRITERION= .2297    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 813
*** TIME = .757382E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1731E-04    OSCILLATION LIMIT = 136.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.58    CRITERION= .2316
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4138
    HT FLOW CONVERGENCE VALUE= .9335E-01    CRITERION= .2289    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 814
*** TIME = .765272E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1735E-04    OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.87    CRITERION= .2308
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4134
    HT FLOW CONVERGENCE VALUE= .9302E-01    CRITERION= .2278    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 815
*** TIME = .773161E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1732E-04    OSCILLATION LIMIT = 136.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.57    CRITERION= .2297
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4147
    HT FLOW CONVERGENCE VALUE= .9283E-01    CRITERION= .2269    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 816
*** TIME = .781051E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1735E-04    OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.86    CRITERION= .2288
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4142
    HT FLOW CONVERGENCE VALUE= .9238E-01    CRITERION= .2259    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 817
*** TIME = .788940E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1732E-04    OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.56    CRITERION= .2278
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4154
    HT FLOW CONVERGENCE VALUE= .9220E-01    CRITERION= .2250    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 818
*** TIME = .796829E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1735E-04    OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.85    CRITERION= .2269
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4150
    HT FLOW CONVERGENCE VALUE= .9164E-01    CRITERION= .2239    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 819
*** TIME = .804719E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1732E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.56 CRITERION= .2258
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4163
HT FLOW CONVERGENCE VALUE= .9251E-01 CRITERION= .2231 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 820
*** TIME = .812608E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1735E-04 OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .2250
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4159
HT FLOW CONVERGENCE VALUE= .9213E-01 CRITERION= .2220 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 821
*** TIME = .820498E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1733E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .2239
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4171
HT FLOW CONVERGENCE VALUE= .9190E-01 CRITERION= .2211 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 822
*** TIME = .828387E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1736E-04 OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .2231
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4166
HT FLOW CONVERGENCE VALUE= .9135E-01 CRITERION= .2201 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 823
*** TIME = .836276E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1733E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .2220
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4177
HT FLOW CONVERGENCE VALUE= .9112E-01 CRITERION= .2192 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 824
*** TIME = .844166E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1736E-04 OSCILLATION LIMIT = 136.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.83 CRITERION= .2212
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4173
HT FLOW CONVERGENCE VALUE= .9054E-01 CRITERION= .2181 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 825
*** TIME = .852055E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1733E-04 OSCILLATION LIMIT = 136.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .2201
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4184
HT FLOW CONVERGENCE VALUE= .9039E-01 CRITERION= .2172 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 826
*** TIME = .859945E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1736E-04 OSCILLATION LIMIT = 137.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.82 CRITERION= .2192

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4180
 HT FLOW CONVERGENCE VALUE= .8982E-01 CRITERION= .2162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 827
 *** TIME = .867834E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .2182
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4191
 HT FLOW CONVERGENCE VALUE= .8953E-01 CRITERION= .2153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 828
 *** TIME = .875723E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1736E-04 OSCILLATION LIMIT = 137.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.81 CRITERION= .2173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4188
 HT FLOW CONVERGENCE VALUE= .8905E-01 CRITERION= .2142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 829
 *** TIME = .883613E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .2162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4198
 HT FLOW CONVERGENCE VALUE= .8865E-01 CRITERION= .2134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 830
 *** TIME = .891502E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1737E-04 OSCILLATION LIMIT = 137.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.81 CRITERION= .2154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4195
 HT FLOW CONVERGENCE VALUE= .8837E-01 CRITERION= .2123 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 831
 *** TIME = .899392E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.51 CRITERION= .2143
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4205
 HT FLOW CONVERGENCE VALUE= .8803E-01 CRITERION= .2114 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 832
 *** TIME = .907281E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1737E-04 OSCILLATION LIMIT = 137.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.80 CRITERION= .2135
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4202
 HT FLOW CONVERGENCE VALUE= .8776E-01 CRITERION= .2104 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 833
 *** TIME = .915170E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1734E-04 OSCILLATION LIMIT = 136.8
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.50 CRITERION= .2124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4212
 HT FLOW CONVERGENCE VALUE= .8726E-01 CRITERION= .2095 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 834
 *** TIME = .923060E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1737E-04 OSCILLATION LIMIT = 137.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.79 CRITERION= .2115
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4209
 HT FLOW CONVERGENCE VALUE= .8687E-01 CRITERION= .2084 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 835
 *** TIME = .930949E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1735E-04 OSCILLATION LIMIT = 136.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.50 CRITERION= .2105
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4219
 HT FLOW CONVERGENCE VALUE= .8661E-01 CRITERION= .2075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 836
 *** TIME = .938839E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1738E-04 OSCILLATION LIMIT = 137.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.78 CRITERION= .2096
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4217
 HT FLOW CONVERGENCE VALUE= .8609E-01 CRITERION= .2065 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 837
 *** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1735E-04 OSCILLATION LIMIT = 136.9

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:09:35 JUN 20, 1995 CP= 45934.800
 FOR SUPPORT CALL ROBERT BAHNEY. PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 37.56 CRITERION= .2098
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3508
 HT FLOW CONVERGENCE VALUE= .7984E-01 CRITERION= .2058 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 838
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1211E-04 OSCILLATION LIMIT = 95.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.85 CRITERION= .2092
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3532
 HT FLOW CONVERGENCE VALUE= .7835E-01 CRITERION= .2050 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 839
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.55 CRITERION= .2084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3550
 HT FLOW CONVERGENCE VALUE= .7795E-01 CRITERION= .2043 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 840
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1221E-04 OSCILLATION LIMIT = 96.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.83 CRITERION= .2078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3537
 HT FLOW CONVERGENCE VALUE= .7775E-01 CRITERION= .2035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 841
 *** TIME = .978286E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .1214E-04 OSCILLATION LIMIT = 95.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.53 CRITERION= .2069
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3555
 HT FLOW CONVERGENCE VALUE= .7759E-01 CRITERION= .2029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 842
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1221E-04 OSCILLATION LIMIT = 96.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.82 CRITERION= .2063
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3542
 HT FLOW CONVERGENCE VALUE= .7707E-01 CRITERION= .2020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 843
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1215E-04 OSCILLATION LIMIT = 95.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.52 CRITERION= .2055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3559
 HT FLOW CONVERGENCE VALUE= .7695E-01 CRITERION= .2014 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 844
 *** TIME = .100195E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1222E-04 OSCILLATION LIMIT = 96.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.81 CRITERION= .2049
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3546
 HT FLOW CONVERGENCE VALUE= .7643E-01 CRITERION= .2006 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 845
 *** TIME = .100984E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.51 CRITERION= .2040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3563
 HT FLOW CONVERGENCE VALUE= .7629E-01 CRITERION= .1999 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 846
 *** TIME = .101773E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1222E-04 OSCILLATION LIMIT = 96.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.80 CRITERION= .2034
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3552
 HT FLOW CONVERGENCE VALUE= .7604E-01 CRITERION= .1991 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 847
 *** TIME = .102562E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1216E-04 OSCILLATION LIMIT = 95.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.50 CRITERION= .2026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3569
 HT FLOW CONVERGENCE VALUE= .7568E-01 CRITERION= .1985 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 848
 *** TIME = .103351E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.78 CRITERION= .2020
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3557
 HT FLOW CONVERGENCE VALUE= .7470E-01 CRITERION= .1976 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 849
*** TIME = .104140E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1217E-04 OSCILLATION LIMIT = 96.02
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.49 CRITERION= .2011
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3574
HT FLOW CONVERGENCE VALUE= .7457E-01 CRITERION= .1970 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 850
*** TIME = .104929E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.77 CRITERION= .2005
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3562
HT FLOW CONVERGENCE VALUE= .7425E-01 CRITERION= .1962 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 851
*** TIME = .105718E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1218E-04 OSCILLATION LIMIT = 96.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.47 CRITERION= .1997
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3578
HT FLOW CONVERGENCE VALUE= .7407E-01 CRITERION= .1955 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 852
*** TIME = .106507E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1224E-04 OSCILLATION LIMIT = 96.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.76 CRITERION= .1991
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3568
HT FLOW CONVERGENCE VALUE= .7385E-01 CRITERION= .1947 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 853
*** TIME = .107296E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1219E-04 OSCILLATION LIMIT = 96.15
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.46 CRITERION= .1982
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3583
HT FLOW CONVERGENCE VALUE= .7374E-01 CRITERION= .1941 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 854
*** TIME = .108085E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.75 CRITERION= .1976
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3573
HT FLOW CONVERGENCE VALUE= .7331E-01 CRITERION= .1932 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 855
*** TIME = .108874E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1219E-04 OSCILLATION LIMIT = 96.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.45 CRITERION= .1968
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3588
HT FLOW CONVERGENCE VALUE= .7329E-01 CRITERION= .1926 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 856
*** TIME = .109663E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.74 CRITERION= .1962
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3578

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HT FLOW CONVERGENCE VALUE= .7291E-01 CRITERION= .1918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 857
 *** TIME = .110452E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1220E-04 OSCILLATION LIMIT = 96.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.44 CRITERION= .1954
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3593
 HT FLOW CONVERGENCE VALUE= .7259E-01 CRITERION= .1911 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 858
 *** TIME = .111241E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.72 CRITERION= .1948
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3583
 HT FLOW CONVERGENCE VALUE= .7246E-01 CRITERION= .1903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 859
 *** TIME = .112029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1221E-04 OSCILLATION LIMIT = 96.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.43 CRITERION= .1939
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3598
 HT FLOW CONVERGENCE VALUE= .7241E-01 CRITERION= .1896 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 860
 *** TIME = .112818E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.71 CRITERION= .1933
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3589
 HT FLOW CONVERGENCE VALUE= .7210E-01 CRITERION= .1888 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 861
 *** TIME = .113607E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1221E-04 OSCILLATION LIMIT = 96.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.41 CRITERION= .1925
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3603
 HT FLOW CONVERGENCE VALUE= .7186E-01 CRITERION= .1882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 862
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.70 CRITERION= .1919
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3594
 HT FLOW CONVERGENCE VALUE= .7131E-01 CRITERION= .1873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 863
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1222E-04 OSCILLATION LIMIT = 96.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.40 CRITERION= .1910
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3607
 HT FLOW CONVERGENCE VALUE= .7136E-01 CRITERION= .1867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 864
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.69 CRITERION= .1904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3599
 HT FLOW CONVERGENCE VALUE= .7088E-01 CRITERION= .1859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 865
 *** TIME = .116763E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.39 CRITERION= .1896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3613
 HT FLOW CONVERGENCE VALUE= .7078E-01 CRITERION= .1852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 866
 *** TIME = .117552E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = 96.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.68 CRITERION= .1890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3604
 HT FLOW CONVERGENCE VALUE= .7037E-01 CRITERION= .1844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 867
 *** TIME = .118341E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1223E-04 OSCILLATION LIMIT = 96.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.38 CRITERION= .1881
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3617
 HT FLOW CONVERGENCE VALUE= .7005E-01 CRITERION= .1837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 868
 *** TIME = .119130E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1228E-04 OSCILLATION LIMIT = 96.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.66 CRITERION= .1875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3609
 HT FLOW CONVERGENCE VALUE= .6911E-01 CRITERION= .1829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 869
 *** TIME = .119919E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1224E-04 OSCILLATION LIMIT = 96.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.37 CRITERION= .1867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3622
 HT FLOW CONVERGENCE VALUE= .6858E-01 CRITERION= .1823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 870
 *** TIME = .120708E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1229E-04 OSCILLATION LIMIT = 96.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.65 CRITERION= .1861
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3615
 HT FLOW CONVERGENCE VALUE= .6815E-01 CRITERION= .1814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 871
 *** TIME = .121497E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.35 CRITERION= .1852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3627
 HT FLOW CONVERGENCE VALUE= .6750E-01 CRITERION= .1808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 872
 *** TIME = .122286E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1229E-04 OSCILLATION LIMIT = 96.99

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.64 CRITERION= .1846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3620
 HT FLOW CONVERGENCE VALUE= .6569E-01 CRITERION= .1800 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 873
 *** TIME = .123075E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1225E-04 OSCILLATION LIMIT = 96.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.34 CRITERION= .1838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3632
 HT FLOW CONVERGENCE VALUE= .6540E-01 CRITERION= .1793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 874
 *** TIME = .123864E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1230E-04 OSCILLATION LIMIT = 97.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.63 CRITERION= .1832
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3625
 HT FLOW CONVERGENCE VALUE= .6500E-01 CRITERION= .1785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 875
 *** TIME = .124653E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1226E-04 OSCILLATION LIMIT = 96.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.33 CRITERION= .1823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3637
 HT FLOW CONVERGENCE VALUE= .6459E-01 CRITERION= .1778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 876
 *** TIME = .125441E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1231E-04 OSCILLATION LIMIT = 97.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.62 CRITERION= .1817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3630
 HT FLOW CONVERGENCE VALUE= .6433E-01 CRITERION= .1770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 40 COMPLETED. CUM ITER = 877
 *** TIME = .126230E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1227E-04 OSCILLATION LIMIT = 96.80

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:46:40 JUN 20, 1995 CP= 48128.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 31.74 CRITERION= .1798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2951
 HT FLOW CONVERGENCE VALUE= .5306E-01 CRITERION= .1765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 1 COMPLETED. CUM ITER = 878
 *** TIME = .127019E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1173E-04 OSCILLATION LIMIT = 92.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.02 CRITERION= .1793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2987
 HT FLOW CONVERGENCE VALUE= .5248E-01 CRITERION= .1758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 2 COMPLETED. CUM ITER = 879

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*** TIME = .127808E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1182E-04    OSCILLATION LIMIT = 93.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.73    CRITERION= .1786
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3007
    HT FLOW CONVERGENCE VALUE= .5210E-01    CRITERION= .1753    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 3 COMPLETED. CUM ITER = 880
*** TIME = .128597E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1191E-04    OSCILLATION LIMIT = 93.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01    CRITERION= .1782
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2988
    HT FLOW CONVERGENCE VALUE= .5128E-01    CRITERION= .1746    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 4 COMPLETED. CUM ITER = 881
*** TIME = .129386E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1182E-04    OSCILLATION LIMIT = 93.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.72    CRITERION= .1774
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3010
    HT FLOW CONVERGENCE VALUE= .5124E-01    CRITERION= .1741    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 5 COMPLETED. CUM ITER = 882
*** TIME = .130175E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1192E-04    OSCILLATION LIMIT = 94.01
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01    CRITERION= .1770
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2992
    HT FLOW CONVERGENCE VALUE= .5104E-01    CRITERION= .1734    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 883
*** TIME = .130964E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1182E-04    OSCILLATION LIMIT = 93.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.71    CRITERION= .1763
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3013
    HT FLOW CONVERGENCE VALUE= .5099E-01    CRITERION= .1729    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 884
*** TIME = .131753E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1192E-04    OSCILLATION LIMIT = 94.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.00    CRITERION= .1758
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2996
    HT FLOW CONVERGENCE VALUE= .5062E-01    CRITERION= .1722    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 885
*** TIME = .132542E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1183E-04    OSCILLATION LIMIT = 93.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.70    CRITERION= .1751
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3016
    HT FLOW CONVERGENCE VALUE= .5067E-01    CRITERION= .1717    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 886
*** TIME = .133331E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1192E-04    OSCILLATION LIMIT = 94.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.99    CRITERION= .1746
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2999
    HT FLOW CONVERGENCE VALUE= .5006E-01    CRITERION= .1710    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 887
*** TIME = .134120E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1184E-04 OSCILLATION LIMIT = 93.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.69 CRITERION= .1739
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3019
HT FLOW CONVERGENCE VALUE= .4979E-01 CRITERION= .1705 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 888
*** TIME = .134909E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1193E-04 OSCILLATION LIMIT = 94.09
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.98 CRITERION= .1734
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3003
HT FLOW CONVERGENCE VALUE= .4950E-01 CRITERION= .1698 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 889
*** TIME = .135698E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1184E-04 OSCILLATION LIMIT = 93.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.68 CRITERION= .1727
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3022
HT FLOW CONVERGENCE VALUE= .4943E-01 CRITERION= .1693 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 890
*** TIME = .136487E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1193E-04 OSCILLATION LIMIT = 94.13
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.97 CRITERION= .1722
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3006
HT FLOW CONVERGENCE VALUE= .4912E-01 CRITERION= .1686 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 891
*** TIME = .137276E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1185E-04 OSCILLATION LIMIT = 93.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.67 CRITERION= .1715
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3025
HT FLOW CONVERGENCE VALUE= .4903E-01 CRITERION= .1681 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 892
*** TIME = .138065E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1194E-04 OSCILLATION LIMIT = 94.16
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.96 CRITERION= .1710
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3010
HT FLOW CONVERGENCE VALUE= .4866E-01 CRITERION= .1674 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 893
*** TIME = .138853E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1186E-04 OSCILLATION LIMIT = 93.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.67 CRITERION= .1703
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3029
HT FLOW CONVERGENCE VALUE= .4860E-01 CRITERION= .1669 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 894
*** TIME = .139642E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1194E-04 OSCILLATION LIMIT = 94.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.95 CRITERION= .1699

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3014
 HT FLOW CONVERGENCE VALUE= .4811E-01 CRITERION= .1662 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 895
 *** TIME = .140431E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1186E-04 OSCILLATION LIMIT = 93.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.66 CRITERION= .1691
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3032
 HT FLOW CONVERGENCE VALUE= .4791E-01 CRITERION= .1657 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 896
 *** TIME = .141220E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1195E-04 OSCILLATION LIMIT = 94.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .1687
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3017
 HT FLOW CONVERGENCE VALUE= .4755E-01 CRITERION= .1650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 897
 *** TIME = .142009E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1187E-04 OSCILLATION LIMIT = 93.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.65 CRITERION= .1680
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3035
 HT FLOW CONVERGENCE VALUE= .4749E-01 CRITERION= .1645 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 898
 *** TIME = .142798E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1195E-04 OSCILLATION LIMIT = 94.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .1675
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3021
 HT FLOW CONVERGENCE VALUE= .4716E-01 CRITERION= .1638 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 899
 *** TIME = .143587E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1188E-04 OSCILLATION LIMIT = 93.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.64 CRITERION= .1668
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3039
 HT FLOW CONVERGENCE VALUE= .4721E-01 CRITERION= .1633 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 900
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1196E-04 OSCILLATION LIMIT = 94.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.93 CRITERION= .1663
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3025
 HT FLOW CONVERGENCE VALUE= .4706E-01 CRITERION= .1626 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 901
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1188E-04 OSCILLATION LIMIT = 93.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.63 CRITERION= .1656
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3042
 HT FLOW CONVERGENCE VALUE= .4708E-01 CRITERION= .1620 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 902
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1196E-04 OSCILLATION LIMIT = 94.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.92 CRITERION= .1651
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3029
 HT FLOW CONVERGENCE VALUE= .4670E-01 CRITERION= .1613 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 903
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1189E-04 OSCILLATION LIMIT = 93.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.62 CRITERION= .1644
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3045
 HT FLOW CONVERGENCE VALUE= .4650E-01 CRITERION= .1608 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 904
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1196E-04 OSCILLATION LIMIT = 94.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.91 CRITERION= .1639
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3032
 HT FLOW CONVERGENCE VALUE= .4614E-01 CRITERION= .1601 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 905
 *** TIME = .148321E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1190E-04 OSCILLATION LIMIT = 93.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.61 CRITERION= .1632
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3048
 HT FLOW CONVERGENCE VALUE= .4608E-01 CRITERION= .1596 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 906
 *** TIME = .149110E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1197E-04 OSCILLATION LIMIT = 94.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.90 CRITERION= .1627
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3036
 HT FLOW CONVERGENCE VALUE= .4574E-01 CRITERION= .1589 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 907
 *** TIME = .149899E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1191E-04 OSCILLATION LIMIT = 93.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.60 CRITERION= .1620
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3052
 HT FLOW CONVERGENCE VALUE= .4548E-01 CRITERION= .1584 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 908
 *** TIME = .150688E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1198E-04 OSCILLATION LIMIT = 94.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.89 CRITERION= .1616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3040
 HT FLOW CONVERGENCE VALUE= .4516E-01 CRITERION= .1577 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 909
 *** TIME = .151476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1191E-04 OSCILLATION LIMIT = 93.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.60 CRITERION= .1608
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3055
 HT FLOW CONVERGENCE VALUE= .4514E-01 CRITERION= .1572 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 910
 *** TIME = .152265E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .1198E-04  OSCILLATION LIMIT = 94.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.88  CRITERION= .1604
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3044
HT FLOW CONVERGENCE VALUE= .4490E-01 CRITERION= .1565  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 911
*** TIME = .153054E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1192E-04  OSCILLATION LIMIT = 94.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.59  CRITERION= .1597
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3059
HT FLOW CONVERGENCE VALUE= .4484E-01 CRITERION= .1560  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 912
*** TIME = .153843E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1199E-04  OSCILLATION LIMIT = 94.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.87  CRITERION= .1592
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3048
HT FLOW CONVERGENCE VALUE= .4458E-01 CRITERION= .1553  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 913
*** TIME = .154632E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1193E-04  OSCILLATION LIMIT = 94.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.58  CRITERION= .1585
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3062
HT FLOW CONVERGENCE VALUE= .4451E-01 CRITERION= .1548  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 914
*** TIME = .155421E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1199E-04  OSCILLATION LIMIT = 94.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.87  CRITERION= .1580
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3052
HT FLOW CONVERGENCE VALUE= .4426E-01 CRITERION= .1541  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 915
*** TIME = .156210E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1193E-04  OSCILLATION LIMIT = 94.15
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.57  CRITERION= .1573
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3065
HT FLOW CONVERGENCE VALUE= .4418E-01 CRITERION= .1536  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 916
*** TIME = .156999E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1200E-04  OSCILLATION LIMIT = 94.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.86  CRITERION= .1568
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3055
HT FLOW CONVERGENCE VALUE= .4392E-01 CRITERION= .1529  <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 917
*** TIME = .157788E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1194E-04  OSCILLATION LIMIT = 94.20

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***** ANSYS SOLVE COMMAND *****

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FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 26.58 CRITERION= .1552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2393
 HT FLOW CONVERGENCE VALUE= .3521E-01 CRITERION= .1525 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 918
 *** TIME = .158577E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1105E-04 OSCILLATION LIMIT = 87.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.87 CRITERION= .1548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2419
 HT FLOW CONVERGENCE VALUE= .3518E-01 CRITERION= .1520 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 919
 *** TIME = .159366E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1112E-04 OSCILLATION LIMIT = 87.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.58 CRITERION= .1543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2441
 HT FLOW CONVERGENCE VALUE= .3526E-01 CRITERION= .1516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 920
 *** TIME = .160155E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1124E-04 OSCILLATION LIMIT = 88.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.87 CRITERION= .1539
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2419
 HT FLOW CONVERGENCE VALUE= .3499E-01 CRITERION= .1510 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 921
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1112E-04 OSCILLATION LIMIT = 87.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.57 CRITERION= .1533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2443
 HT FLOW CONVERGENCE VALUE= .3507E-01 CRITERION= .1506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 922
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = 88.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.86 CRITERION= .1530
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2422
 HT FLOW CONVERGENCE VALUE= .3479E-01 CRITERION= .1501 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 923
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1112E-04 OSCILLATION LIMIT = 87.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.56 CRITERION= .1524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2445
 HT FLOW CONVERGENCE VALUE= .3486E-01 CRITERION= .1497 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 924
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = 88.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.85 CRITERION= .1521
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2425

HT FLOW CONVERGENCE VALUE= .3459E-01 CRITERION= .1491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 925
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1113E-04 OSCILLATION LIMIT = 87.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.56 CRITERION= .1515
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2447
 HT FLOW CONVERGENCE VALUE= .3466E-01 CRITERION= .1488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 926
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1125E-04 OSCILLATION LIMIT = 88.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.85 CRITERION= .1511
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2428
 HT FLOW CONVERGENCE VALUE= .3441E-01 CRITERION= .1482 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 927
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1114E-04 OSCILLATION LIMIT = 87.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.55 CRITERION= .1506
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2449
 HT FLOW CONVERGENCE VALUE= .3447E-01 CRITERION= .1478 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 928
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1126E-04 OSCILLATION LIMIT = 88.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.84 CRITERION= .1502
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2430
 HT FLOW CONVERGENCE VALUE= .3422E-01 CRITERION= .1473 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 929
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1114E-04 OSCILLATION LIMIT = 87.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.55 CRITERION= .1496
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2451
 HT FLOW CONVERGENCE VALUE= .3426E-01 CRITERION= .1469 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 930
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1126E-04 OSCILLATION LIMIT = 88.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.83 CRITERION= .1493
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2433
 HT FLOW CONVERGENCE VALUE= .3401E-01 CRITERION= .1463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 931
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1115E-04 OSCILLATION LIMIT = 87.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.54 CRITERION= .1487
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2453
 HT FLOW CONVERGENCE VALUE= .3406E-01 CRITERION= .1459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 932
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1126E-04 OSCILLATION LIMIT = 88.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.83 CRITERION= .1484
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2435
 HT FLOW CONVERGENCE VALUE= .3381E-01 CRITERION= .1454 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 933
 *** TIME = .170411E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1116E-04 OSCILLATION LIMIT = 88.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.53 CRITERION= .1478
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2455
 HT FLOW CONVERGENCE VALUE= .3386E-01 CRITERION= .1450 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 934
 *** TIME = .171200E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1127E-04 OSCILLATION LIMIT = 88.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.82 CRITERION= .1474
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2438
 HT FLOW CONVERGENCE VALUE= .3363E-01 CRITERION= .1444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 935
 *** TIME = .171989E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1116E-04 OSCILLATION LIMIT = 88.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.53 CRITERION= .1468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2457
 HT FLOW CONVERGENCE VALUE= .3364E-01 CRITERION= .1441 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 936
 *** TIME = .172778E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1127E-04 OSCILLATION LIMIT = 88.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.82 CRITERION= .1465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2440
 HT FLOW CONVERGENCE VALUE= .3343E-01 CRITERION= .1435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 937
 *** TIME = .173567E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1117E-04 OSCILLATION LIMIT = 88.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .1459
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2459
 HT FLOW CONVERGENCE VALUE= .3345E-01 CRITERION= .1431 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 938
 *** TIME = .174356E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1128E-04 OSCILLATION LIMIT = 88.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.81 CRITERION= .1456
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2443
 HT FLOW CONVERGENCE VALUE= .3323E-01 CRITERION= .1426 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 939
 *** TIME = .175145E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1118E-04 OSCILLATION LIMIT = 88.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.51 CRITERION= .1450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2461
 HT FLOW CONVERGENCE VALUE= .3324E-01 CRITERION= .1422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 940
 *** TIME = .175934E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1128E-04 OSCILLATION LIMIT = 88.99

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.80 CRITERION= .1447
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2446
 HT FLOW CONVERGENCE VALUE= .3302E-01 CRITERION= .1416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 941
 *** TIME = .176723E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1118E-04 OSCILLATION LIMIT = 88.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.51 CRITERION= .1441
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2463
 HT FLOW CONVERGENCE VALUE= .3301E-01 CRITERION= .1412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 942
 *** TIME = .177512E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1128E-04 OSCILLATION LIMIT = 89.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.80 CRITERION= .1437
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2448
 HT FLOW CONVERGENCE VALUE= .3279E-01 CRITERION= .1407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 943
 *** TIME = .178300E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1119E-04 OSCILLATION LIMIT = 88.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.50 CRITERION= .1431
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2465
 HT FLOW CONVERGENCE VALUE= .3280E-01 CRITERION= .1403 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 944
 *** TIME = .179089E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1129E-04 OSCILLATION LIMIT = 89.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.79 CRITERION= .1428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2451
 HT FLOW CONVERGENCE VALUE= .3257E-01 CRITERION= .1397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 945
 *** TIME = .179878E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1120E-04 OSCILLATION LIMIT = 88.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.50 CRITERION= .1422
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2467
 HT FLOW CONVERGENCE VALUE= .3258E-01 CRITERION= .1394 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 946
 *** TIME = .180667E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1129E-04 OSCILLATION LIMIT = 89.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.78 CRITERION= .1419
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2453
 HT FLOW CONVERGENCE VALUE= .3237E-01 CRITERION= .1388 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 947
 *** TIME = .181456E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1120E-04 OSCILLATION LIMIT = 88.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.49 CRITERION= .1413
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2470
 HT FLOW CONVERGENCE VALUE= .3235E-01 CRITERION= .1384 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 948

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*** TIME = .182245E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1130E-04    OSCILLATION LIMIT = 89.12
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.78    CRITERION= .1409
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2456
    HT FLOW CONVERGENCE VALUE= .3214E-01    CRITERION= .1379    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 32 COMPLETED.    CUM ITER = 949
*** TIME = .183034E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1121E-04    OSCILLATION LIMIT = 88.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.48    CRITERION= .1404
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2472
    HT FLOW CONVERGENCE VALUE= .3213E-01    CRITERION= .1375    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 33 COMPLETED.    CUM ITER = 950
*** TIME = .183823E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1130E-04    OSCILLATION LIMIT = 89.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.77    CRITERION= .1400
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2458
    HT FLOW CONVERGENCE VALUE= .3194E-01    CRITERION= .1369    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 34 COMPLETED.    CUM ITER = 951
*** TIME = .184612E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1122E-04    OSCILLATION LIMIT = 88.49
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.48    CRITERION= .1394
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2474
    HT FLOW CONVERGENCE VALUE= .3193E-01    CRITERION= .1365    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 35 COMPLETED.    CUM ITER = 952
*** TIME = .185401E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1130E-04    OSCILLATION LIMIT = 89.17
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.77    CRITERION= .1391
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2461
    HT FLOW CONVERGENCE VALUE= .3173E-01    CRITERION= .1360    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 36 COMPLETED.    CUM ITER = 953
*** TIME = .186190E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1122E-04    OSCILLATION LIMIT = 88.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.47    CRITERION= .1385
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2476
    HT FLOW CONVERGENCE VALUE= .3171E-01    CRITERION= .1356    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 37 COMPLETED.    CUM ITER = 954
*** TIME = .186979E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1131E-04    OSCILLATION LIMIT = 89.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.76    CRITERION= .1382
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2464
    HT FLOW CONVERGENCE VALUE= .3152E-01    CRITERION= .1350    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 38 COMPLETED.    CUM ITER = 955
*** TIME = .187768E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1123E-04    OSCILLATION LIMIT = 88.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.46    CRITERION= .1376
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2478
    HT FLOW CONVERGENCE VALUE= .3149E-01    CRITERION= .1346    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 956
*** TIME = .188557E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1131E-04 OSCILLATION LIMIT = 89.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 26.75 CRITERION= .1372
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2466
HT FLOW CONVERGENCE VALUE= .3130E-01 CRITERION= .1341 <<< CONVERGED
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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 957
*** TIME = .189346E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1124E-04 OSCILLATION LIMIT = 88.64
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***** ANSYS SOLVE COMMAND *****

1

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 03:00:59 JUN 20, 1995 CP= 52517.480
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 22.60 CRITERION= .1360
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2003
HT FLOW CONVERGENCE VALUE= .2583E-01 CRITERION= .1338 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 958
*** TIME = .190135E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1063E-04 OSCILLATION LIMIT = 83.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 22.89 CRITERION= .1357
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2014
HT FLOW CONVERGENCE VALUE= .2575E-01 CRITERION= .1333 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 959
*** TIME = .190923E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1064E-04 OSCILLATION LIMIT = 83.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 22.60 CRITERION= .1352
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2034
HT FLOW CONVERGENCE VALUE= .2580E-01 CRITERION= .1330 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 960
*** TIME = .191712E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = 85.02
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 22.89 CRITERION= .1350
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2015
HT FLOW CONVERGENCE VALUE= .2559E-01 CRITERION= .1326 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 961
*** TIME = .192501E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1064E-04 OSCILLATION LIMIT = 83.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 22.59 CRITERION= .1345
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2036
HT FLOW CONVERGENCE VALUE= .2562E-01 CRITERION= .1323 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 962
*** TIME = .193290E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = 85.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 22.88 CRITERION= .1342
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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2017
 HT FLOW CONVERGENCE VALUE= .2539E-01 CRITERION= .1318 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 963
 *** TIME = .194079E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1064E-04 OSCILLATION LIMIT = 83.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.59 CRITERION= .1337
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2037
 HT FLOW CONVERGENCE VALUE= .2542E-01 CRITERION= .1315 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 964
 *** TIME = .194868E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = 85.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.88 CRITERION= .1335
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2019
 HT FLOW CONVERGENCE VALUE= .2520E-01 CRITERION= .1310 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 965
 *** TIME = .195657E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1065E-04 OSCILLATION LIMIT = 84.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.58 CRITERION= .1330
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2038
 HT FLOW CONVERGENCE VALUE= .2524E-01 CRITERION= .1308 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 966
 *** TIME = .196446E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.87 CRITERION= .1327
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2021
 HT FLOW CONVERGENCE VALUE= .2506E-01 CRITERION= .1303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 967
 *** TIME = .197235E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1066E-04 OSCILLATION LIMIT = 84.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.58 CRITERION= .1322
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2040
 HT FLOW CONVERGENCE VALUE= .2512E-01 CRITERION= .1300 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 968
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.87 CRITERION= .1320
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2023
 HT FLOW CONVERGENCE VALUE= .2493E-01 CRITERION= .1295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 969
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1066E-04 OSCILLATION LIMIT = 84.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.58 CRITERION= .1315
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2041
 HT FLOW CONVERGENCE VALUE= .2498E-01 CRITERION= .1292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 970
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.86 CRITERION= .1312
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2025
 HT FLOW CONVERGENCE VALUE= .2480E-01 CRITERION= .1288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 971
 *** TIME = .200391E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1067E-04 OSCILLATION LIMIT = 84.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.57 CRITERION= .1307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2043
 HT FLOW CONVERGENCE VALUE= .2486E-01 CRITERION= .1285 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 972
 *** TIME = .201180E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.86 CRITERION= .1305
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2027
 HT FLOW CONVERGENCE VALUE= .2469E-01 CRITERION= .1280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 973
 *** TIME = .201969E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = 84.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.57 CRITERION= .1300
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2044
 HT FLOW CONVERGENCE VALUE= .2474E-01 CRITERION= .1277 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 974
 *** TIME = .202758E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1080E-04 OSCILLATION LIMIT = 85.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.86 CRITERION= .1297
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2028
 HT FLOW CONVERGENCE VALUE= .2456E-01 CRITERION= .1272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 975
 *** TIME = .203547E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = 84.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.56 CRITERION= .1292
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2046
 HT FLOW CONVERGENCE VALUE= .2461E-01 CRITERION= .1270 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 976
 *** TIME = .204335E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1080E-04 OSCILLATION LIMIT = 85.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.85 CRITERION= .1290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2031
 HT FLOW CONVERGENCE VALUE= .2444E-01 CRITERION= .1265 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 977
 *** TIME = .205124E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1069E-04 OSCILLATION LIMIT = 84.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.56 CRITERION= .1285
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2047
 HT FLOW CONVERGENCE VALUE= .2451E-01 CRITERION= .1262 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 978
 *** TIME = .205913E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .1080E-04  OSCILLATION LIMIT = 85.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.85  CRITERION= .1282
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2033
  HT FLOW CONVERGENCE VALUE= .2444E-01 CRITERION= .1257  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 979
*** TIME = .206702E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1070E-04  OSCILLATION LIMIT = 84.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.55  CRITERION= .1277
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2049
  HT FLOW CONVERGENCE VALUE= .2453E-01 CRITERION= .1254  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 980
*** TIME = .207491E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1081E-04  OSCILLATION LIMIT = 85.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.84  CRITERION= .1275
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2035
  HT FLOW CONVERGENCE VALUE= .2443E-01 CRITERION= .1250  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 981
*** TIME = .208280E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1070E-04  OSCILLATION LIMIT = 84.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.55  CRITERION= .1270
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2051
  HT FLOW CONVERGENCE VALUE= .2462E-01 CRITERION= .1247  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 982
*** TIME = .209069E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1081E-04  OSCILLATION LIMIT = 85.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.84  CRITERION= .1267
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2037
  HT FLOW CONVERGENCE VALUE= .2464E-01 CRITERION= .1242  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 983
*** TIME = .209858E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1071E-04  OSCILLATION LIMIT = 84.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.55  CRITERION= .1262
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2052
  HT FLOW CONVERGENCE VALUE= .2489E-01 CRITERION= .1239  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 984
*** TIME = .210647E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1081E-04  OSCILLATION LIMIT = 85.32
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.84  CRITERION= .1260
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2039
  HT FLOW CONVERGENCE VALUE= .2482E-01 CRITERION= .1235  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 985
*** TIME = .211436E+10  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1072E-04  OSCILLATION LIMIT = 84.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 22.55  CRITERION= .1255
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2054
  HT FLOW CONVERGENCE VALUE= .2483E-01 CRITERION= .1232  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 986
 *** TIME = .212225E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1082E-04 OSCILLATION LIMIT = 85.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.84 CRITERION= .1252
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2041
 HT FLOW CONVERGENCE VALUE= .2473E-01 CRITERION= .1227 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 987
 *** TIME = .213014E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 84.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.54 CRITERION= .1247
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2056
 HT FLOW CONVERGENCE VALUE= .2484E-01 CRITERION= .1224 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 988
 *** TIME = .213803E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1082E-04 OSCILLATION LIMIT = 85.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.83 CRITERION= .1245
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2044
 HT FLOW CONVERGENCE VALUE= .2485E-01 CRITERION= .1219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 989
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1073E-04 OSCILLATION LIMIT = 84.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.54 CRITERION= .1240
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2058
 HT FLOW CONVERGENCE VALUE= .2496E-01 CRITERION= .1216 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 990
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1083E-04 OSCILLATION LIMIT = 85.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.83 CRITERION= .1237
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2046
 HT FLOW CONVERGENCE VALUE= .2512E-01 CRITERION= .1212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 991
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1074E-04 OSCILLATION LIMIT = 84.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.54 CRITERION= .1232
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2060
 HT FLOW CONVERGENCE VALUE= .2576E-01 CRITERION= .1209 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 992
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1083E-04 OSCILLATION LIMIT = 85.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.83 CRITERION= .1230
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2048
 HT FLOW CONVERGENCE VALUE= .2566E-01 CRITERION= .1204 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 993
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1075E-04 OSCILLATION LIMIT = 84.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.54 CRITERION= .1225
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2061

HT FLOW CONVERGENCE VALUE= .2559E-01 CRITERION= .1201 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 994
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1084E-04 OSCILLATION LIMIT = 85.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.83 CRITERION= .1222
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2050
 HT FLOW CONVERGENCE VALUE= .2551E-01 CRITERION= .1197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 995
 *** TIME = .219325E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1075E-04 OSCILLATION LIMIT = 84.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.54 CRITERION= .1218
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2063
 HT FLOW CONVERGENCE VALUE= .2548E-01 CRITERION= .1194 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 996
 *** TIME = .220114E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1084E-04 OSCILLATION LIMIT = 85.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.83 CRITERION= .1215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2052
 HT FLOW CONVERGENCE VALUE= .2533E-01 CRITERION= .1189 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 997
 *** TIME = .220903E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1076E-04 OSCILLATION LIMIT = 84.88

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:38:04 JUN 20, 1995 CP= 54712.660
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1778
 HT FLOW CONVERGENCE VALUE= .2365E-01 CRITERION= .1187 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 998
 *** TIME = .221692E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8629E-05 OSCILLATION LIMIT = 68.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1209
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1775
 HT FLOW CONVERGENCE VALUE= .2356E-01 CRITERION= .1183 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 999
 *** TIME = .222481E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8577E-05 OSCILLATION LIMIT = 67.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1205
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1791
 HT FLOW CONVERGENCE VALUE= .2355E-01 CRITERION= .1181 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 1000
 *** TIME = .223270E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8699E-05 OSCILLATION LIMIT = 68.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1203
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1777
 HT FLOW CONVERGENCE VALUE= .2336E-01 CRITERION= .1177 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 1001
 *** TIME = .226059E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8583E-05 OSCILLATION LIMIT = 67.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1792
 HT FLOW CONVERGENCE VALUE= .2354E-01 CRITERION= .1174 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 1002
 *** TIME = .224848E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8703E-05 OSCILLATION LIMIT = 68.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1197
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1778
 HT FLOW CONVERGENCE VALUE= .2347E-01 CRITERION= .1170 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 1003
 *** TIME = .225637E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8590E-05 OSCILLATION LIMIT = 67.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1793
 HT FLOW CONVERGENCE VALUE= .2341E-01 CRITERION= .1168 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 1004
 *** TIME = .226426E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8706E-05 OSCILLATION LIMIT = 68.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1191
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1780
 HT FLOW CONVERGENCE VALUE= .2346E-01 CRITERION= .1164 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 1005
 *** TIME = .227215E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8597E-05 OSCILLATION LIMIT = 67.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1187
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1794
 HT FLOW CONVERGENCE VALUE= .2345E-01 CRITERION= .1162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 1006
 *** TIME = .228004E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8710E-05 OSCILLATION LIMIT = 68.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1185
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1781
 HT FLOW CONVERGENCE VALUE= .2349E-01 CRITERION= .1158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 1007
 *** TIME = .228793E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8604E-05 OSCILLATION LIMIT = 67.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1181
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1796
 HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .1156 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 1008
 *** TIME = .229582E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8714E-05 OSCILLATION LIMIT = 68.75

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1179
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1783
 HT FLOW CONVERGENCE VALUE= .2399E-01 CRITERION= .1152 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 1009
 *** TIME = .230370E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8612E-05 OSCILLATION LIMIT = 67.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.06 CRITERION= .1175
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1797
 HT FLOW CONVERGENCE VALUE= .2397E-01 CRITERION= .1150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 1010
 *** TIME = .231159E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8719E-05 OSCILLATION LIMIT = 68.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1784
 HT FLOW CONVERGENCE VALUE= .2390E-01 CRITERION= .1146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 1011
 *** TIME = .231948E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8619E-05 OSCILLATION LIMIT = 68.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1798
 HT FLOW CONVERGENCE VALUE= .2355E-01 CRITERION= .1144 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 1012
 *** TIME = .232737E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8722E-05 OSCILLATION LIMIT = 68.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1167
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1786
 HT FLOW CONVERGENCE VALUE= .2347E-01 CRITERION= .1140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 1013
 *** TIME = .233526E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = 68.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1163
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1799
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .1138 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 1014
 *** TIME = .234315E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8725E-05 OSCILLATION LIMIT = 68.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1161
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1787
 HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 1015
 *** TIME = .235104E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8631E-05 OSCILLATION LIMIT = 68.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1800
 HT FLOW CONVERGENCE VALUE= .2329E-01 CRITERION= .1131 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 1016

*** TIME = .235893E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8729E-05 OSCILLATION LIMIT = 68.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1788
 HT FLOW CONVERGENCE VALUE= .2322E-01 CRITERION= .1127 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 1017
 *** TIME = .236682E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8637E-05 OSCILLATION LIMIT = 68.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1801
 HT FLOW CONVERGENCE VALUE= .2280E-01 CRITERION= .1125 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 1018
 *** TIME = .237471E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8732E-05 OSCILLATION LIMIT = 68.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1149
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1790
 HT FLOW CONVERGENCE VALUE= .2246E-01 CRITERION= .1121 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 1019
 *** TIME = .238260E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8643E-05 OSCILLATION LIMIT = 68.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1145
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1802
 HT FLOW CONVERGENCE VALUE= .2234E-01 CRITERION= .1119 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 1020
 *** TIME = .239049E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8737E-05 OSCILLATION LIMIT = 68.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1143
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1791
 HT FLOW CONVERGENCE VALUE= .2229E-01 CRITERION= .1115 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 1021
 *** TIME = .239838E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8650E-05 OSCILLATION LIMIT = 68.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1803
 HT FLOW CONVERGENCE VALUE= .2223E-01 CRITERION= .1113 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 1022
 *** TIME = .240627E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8741E-05 OSCILLATION LIMIT = 68.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1793
 HT FLOW CONVERGENCE VALUE= .2233E-01 CRITERION= .1109 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 1023
 *** TIME = .241416E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8656E-05 OSCILLATION LIMIT = 68.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1133
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1804
 HT FLOW CONVERGENCE VALUE= .2230E-01 CRITERION= .1107 <<< CONVERGED


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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 1024
*** TIME = .242205E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8745E-05 OSCILLATION LIMIT = 68.99
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1131
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1794
HT FLOW CONVERGENCE VALUE= .2222E-01 CRITERION= .1103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 1025
*** TIME = .242994E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8662E-05 OSCILLATION LIMIT = 68.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1127
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1805
HT FLOW CONVERGENCE VALUE= .2197E-01 CRITERION= .1101 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 1026
*** TIME = .243782E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8748E-05 OSCILLATION LIMIT = 69.02
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1125
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1796
HT FLOW CONVERGENCE VALUE= .2193E-01 CRITERION= .1097 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 1027
*** TIME = .244571E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8668E-05 OSCILLATION LIMIT = 68.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1121
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1806
HT FLOW CONVERGENCE VALUE= .2191E-01 CRITERION= .1094 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 1028
*** TIME = .245360E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8753E-05 OSCILLATION LIMIT = 69.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1119
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1797
HT FLOW CONVERGENCE VALUE= .2183E-01 CRITERION= .1090 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 1029
*** TIME = .246149E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8675E-05 OSCILLATION LIMIT = 68.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1115
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1807
HT FLOW CONVERGENCE VALUE= .2180E-01 CRITERION= .1088 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 1030
*** TIME = .246938E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8756E-05 OSCILLATION LIMIT = 69.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1113
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1798
HT FLOW CONVERGENCE VALUE= .2152E-01 CRITERION= .1084 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 1031
*** TIME = .247727E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8680E-05 OSCILLATION LIMIT = 68.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1109

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1809
 HT FLOW CONVERGENCE VALUE= .2139E-01 CRITERION= .1082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 1032
 *** TIME = .248516E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8760E-05 OSCILLATION LIMIT = 69.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1107
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1800
 HT FLOW CONVERGENCE VALUE= .2130E-01 CRITERION= .1078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 1033
 *** TIME = .249305E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8686E-05 OSCILLATION LIMIT = 68.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1103
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1810
 HT FLOW CONVERGENCE VALUE= .2128E-01 CRITERION= .1076 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 1034
 *** TIME = .250094E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8764E-05 OSCILLATION LIMIT = 69.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1101
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1801
 HT FLOW CONVERGENCE VALUE= .2119E-01 CRITERION= .1072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 1035
 *** TIME = .250883E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8692E-05 OSCILLATION LIMIT = 68.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.07 CRITERION= .1096
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1811
 HT FLOW CONVERGENCE VALUE= .2117E-01 CRITERION= .1070 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 1036
 *** TIME = .251672E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8767E-05 OSCILLATION LIMIT = 69.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .1095
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1803
 HT FLOW CONVERGENCE VALUE= .2108E-01 CRITERION= .1066 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 1037
 *** TIME = .252461E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8697E-05 OSCILLATION LIMIT = 68.61

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:15:09 JUN 20, 1995 CP= 56906.250
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1080
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1379
 HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .1064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 1038
 *** TIME = .253250E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8963E-05 OSCILLATION LIMIT = 70.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1388
 HT FLOW CONVERGENCE VALUE= .1592E-01 CRITERION= .1061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 1039
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8983E-05 OSCILLATION LIMIT = 70.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1403
 HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .1059 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 1040
 *** TIME = .254828E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9140E-05 OSCILLATION LIMIT = 72.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1388
 HT FLOW CONVERGENCE VALUE= .1592E-01 CRITERION= .1056 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 1041
 *** TIME = .255617E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8985E-05 OSCILLATION LIMIT = 70.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1070
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1597E-01 CRITERION= .1055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 1042
 *** TIME = .256406E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9142E-05 OSCILLATION LIMIT = 72.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1069
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1389
 HT FLOW CONVERGENCE VALUE= .1586E-01 CRITERION= .1051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 1043
 *** TIME = .257194E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8991E-05 OSCILLATION LIMIT = 70.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1066
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1591E-01 CRITERION= .1050 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 1044
 *** TIME = .257983E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9144E-05 OSCILLATION LIMIT = 72.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1064
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1390
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .1047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 1045
 *** TIME = .258772E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8996E-05 OSCILLATION LIMIT = 70.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1584E-01 CRITERION= .1045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 9 COMPLETED. CUM ITER = 1046
 *** TIME = .259561E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .9145E-05 OSCILLATION LIMIT = 72.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1060
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1391
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .1042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 10 COMPLETED. CUM ITER = 1047
 *** TIME = .260350E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9001E-05 OSCILLATION LIMIT = 71.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1056
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1577E-01 CRITERION= .1040 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 11 COMPLETED. CUM ITER = 1048
 *** TIME = .261139E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9146E-05 OSCILLATION LIMIT = 72.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1392
 HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .1037 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 12 COMPLETED. CUM ITER = 1049
 *** TIME = .261928E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9007E-05 OSCILLATION LIMIT = 71.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1406
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .1035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 13 COMPLETED. CUM ITER = 1050
 *** TIME = .262717E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9148E-05 OSCILLATION LIMIT = 72.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1050
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1393
 HT FLOW CONVERGENCE VALUE= .1561E-01 CRITERION= .1032 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 14 COMPLETED. CUM ITER = 1051
 *** TIME = .263506E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9012E-05 OSCILLATION LIMIT = 71.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.35 CRITERION= .1047
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1407
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .1031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 15 COMPLETED. CUM ITER = 1052
 *** TIME = .264295E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9149E-05 OSCILLATION LIMIT = 72.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1394
 HT FLOW CONVERGENCE VALUE= .1555E-01 CRITERION= .1027 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 16 COMPLETED. CUM ITER = 1053
 *** TIME = .265084E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9018E-05 OSCILLATION LIMIT = 71.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1407
 HT FLOW CONVERGENCE VALUE= .1558E-01 CRITERION= .1026 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 30 SUBSTEP 17 COMPLETED. CUM ITER = 1054
*** TIME = .265873E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9151E-05 OSCILLATION LIMIT = 72.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1041
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1395
HT FLOW CONVERGENCE VALUE= .1548E-01 CRITERION= .1022 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 18 COMPLETED. CUM ITER = 1055
*** TIME = .266662E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9023E-05 OSCILLATION LIMIT = 71.18
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1037
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1408
HT FLOW CONVERGENCE VALUE= .1551E-01 CRITERION= .1021 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 19 COMPLETED. CUM ITER = 1056
*** TIME = .267451E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9152E-05 OSCILLATION LIMIT = 72.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1036
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1396
HT FLOW CONVERGENCE VALUE= .1542E-01 CRITERION= .1018 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 20 COMPLETED. CUM ITER = 1057
*** TIME = .268240E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9028E-05 OSCILLATION LIMIT = 71.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1032
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1408
HT FLOW CONVERGENCE VALUE= .1545E-01 CRITERION= .1016 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 21 COMPLETED. CUM ITER = 1058
*** TIME = .269029E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9154E-05 OSCILLATION LIMIT = 72.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1031
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1397
HT FLOW CONVERGENCE VALUE= .1536E-01 CRITERION= .1013 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 22 COMPLETED. CUM ITER = 1059
*** TIME = .269817E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9033E-05 OSCILLATION LIMIT = 71.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1028
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1409
HT FLOW CONVERGENCE VALUE= .1538E-01 CRITERION= .1011 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 23 COMPLETED. CUM ITER = 1060
*** TIME = .270606E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9156E-05 OSCILLATION LIMIT = 72.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1026
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1398
HT FLOW CONVERGENCE VALUE= .1529E-01 CRITERION= .1008 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 24 COMPLETED. CUM ITER = 1061
*** TIME = .271395E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9038E-05 OSCILLATION LIMIT = 71.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1023
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1409

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HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .1007 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 25 COMPLETED. CUM ITER = 1062
 *** TIME = .272184E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9158E-05 OSCILLATION LIMIT = 72.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1398
 HT FLOW CONVERGENCE VALUE= .1523E-01 CRITERION= .1003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 26 COMPLETED. CUM ITER = 1063
 *** TIME = .272973E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9043E-05 OSCILLATION LIMIT = 71.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1410
 HT FLOW CONVERGENCE VALUE= .1525E-01 CRITERION= .1002 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 27 COMPLETED. CUM ITER = 1064
 *** TIME = .273762E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9160E-05 OSCILLATION LIMIT = 72.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1399
 HT FLOW CONVERGENCE VALUE= .1517E-01 CRITERION= .9984E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 28 COMPLETED. CUM ITER = 1065
 *** TIME = .274551E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9048E-05 OSCILLATION LIMIT = 71.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1013
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1410
 HT FLOW CONVERGENCE VALUE= .1518E-01 CRITERION= .9969E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 29 COMPLETED. CUM ITER = 1066
 *** TIME = .275340E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9161E-05 OSCILLATION LIMIT = 72.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1012
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1400
 HT FLOW CONVERGENCE VALUE= .1510E-01 CRITERION= .9935E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 30 COMPLETED. CUM ITER = 1067
 *** TIME = .276129E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9053E-05 OSCILLATION LIMIT = 71.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1411
 HT FLOW CONVERGENCE VALUE= .1512E-01 CRITERION= .9921E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 31 COMPLETED. CUM ITER = 1068
 *** TIME = .276918E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9163E-05 OSCILLATION LIMIT = 72.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1007
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1401
 HT FLOW CONVERGENCE VALUE= .1504E-01 CRITERION= .9887E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 32 COMPLETED. CUM ITER = 1069
 *** TIME = .277707E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9058E-05 OSCILLATION LIMIT = 71.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .1004
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1412
 HT FLOW CONVERGENCE VALUE= .1505E-01 CRITERION= .9873E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 33 COMPLETED. CUM ITER = 1070
 *** TIME = .278496E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9165E-05 OSCILLATION LIMIT = 72.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .1003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1402
 HT FLOW CONVERGENCE VALUE= .1498E-01 CRITERION= .9839E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 34 COMPLETED. CUM ITER = 1071
 *** TIME = .279285E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9063E-05 OSCILLATION LIMIT = 71.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .9991E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1412
 HT FLOW CONVERGENCE VALUE= .1499E-01 CRITERION= .9824E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 35 COMPLETED. CUM ITER = 1072
 *** TIME = .280074E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9167E-05 OSCILLATION LIMIT = 72.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .9979E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1403
 HT FLOW CONVERGENCE VALUE= .1491E-01 CRITERION= .9791E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 36 COMPLETED. CUM ITER = 1073
 *** TIME = .280863E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9068E-05 OSCILLATION LIMIT = 71.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .9944E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1413
 HT FLOW CONVERGENCE VALUE= .1492E-01 CRITERION= .9776E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 37 COMPLETED. CUM ITER = 1074
 *** TIME = .281652E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9170E-05 OSCILLATION LIMIT = 72.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .9932E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1404
 HT FLOW CONVERGENCE VALUE= .1485E-01 CRITERION= .9742E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 38 COMPLETED. CUM ITER = 1075
 *** TIME = .282441E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9073E-05 OSCILLATION LIMIT = 71.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.36 CRITERION= .9896E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1413
 HT FLOW CONVERGENCE VALUE= .1485E-01 CRITERION= .9728E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 39 COMPLETED. CUM ITER = 1076
 *** TIME = .283229E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9172E-05 OSCILLATION LIMIT = 72.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 17.65 CRITERION= .9884E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1405
 HT FLOW CONVERGENCE VALUE= .1478E-01 CRITERION= .9694E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 40 COMPLETED. CUM ITER = 1077
 *** TIME = .284018E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9077E-05 OSCILLATION LIMIT = 71.61

Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM FROM .31558E+10 TO .31558E+11 BY .31558E+10

TIME= .31558E+10

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 92.923 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 93.292 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 94.113 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 59100.460 TIME= 04:52:13
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 04:52:13 JUN 20, 1995 CP= 59100.460
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 31
TIME AT END OF THE LOAD STEP.31558E+10
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS

THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9808E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1242
 HT FLOW CONVERGENCE VALUE= .1289E-01 CRITERION= .9682E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 1 COMPLETED. CUM ITER = 1078
 *** TIME = .284807E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9520E-05 OSCILLATION LIMIT = 75.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9798E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1240
 HT FLOW CONVERGENCE VALUE= .1284E-01 CRITERION= .9651E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 2 COMPLETED. CUM ITER = 1079
 *** TIME = .285596E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9461E-05 OSCILLATION LIMIT = 74.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9765E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1251
 HT FLOW CONVERGENCE VALUE= .1287E-01 CRITERION= .9639E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 3 COMPLETED. CUM ITER = 1080
 *** TIME = .286385E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9597E-05 OSCILLATION LIMIT = 75.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9755E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1240
 HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .9608E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 4 COMPLETED. CUM ITER = 1081
 *** TIME = .287174E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9464E-05 OSCILLATION LIMIT = 74.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9722E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1252
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .9596E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 1082
 *** TIME = .287963E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9598E-05 OSCILLATION LIMIT = 75.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9713E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1241
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .9565E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 1083
 *** TIME = .288752E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9469E-05 OSCILLATION LIMIT = 74.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9680E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1252
 HT FLOW CONVERGENCE VALUE= .1276E-01 CRITERION= .9553E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 1084
 *** TIME = .289541E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9599E-05 OSCILLATION LIMIT = 75.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9670E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1242
 HT FLOW CONVERGENCE VALUE= .1269E-01 CRITERION= .9522E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 8 COMPLETED. CUM ITER = 1085
 *** TIME = .290330E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9473E-05 OSCILLATION LIMIT = 74.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9637E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1253
 HT FLOW CONVERGENCE VALUE= .1271E-01 CRITERION= .9510E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 9 COMPLETED. CUM ITER = 1086
 *** TIME = .291119E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9600E-05 OSCILLATION LIMIT = 75.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9627E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1243
 HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .9478E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 10 COMPLETED. CUM ITER = 1087
 *** TIME = .291908E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9478E-05 OSCILLATION LIMIT = 74.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9594E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1253
 HT FLOW CONVERGENCE VALUE= .1266E-01 CRITERION= .9466E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 11 COMPLETED. CUM ITER = 1088
 *** TIME = .292697E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9602E-05 OSCILLATION LIMIT = 75.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9585E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1243
 HT FLOW CONVERGENCE VALUE= .1259E-01 CRITERION= .9435E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 12 COMPLETED. CUM ITER = 1089
 *** TIME = .293486E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9483E-05 OSCILLATION LIMIT = 74.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9552E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1254
 HT FLOW CONVERGENCE VALUE= .1261E-01 CRITERION= .9423E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 13 COMPLETED. CUM ITER = 1090
 *** TIME = .294275E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9603E-05 OSCILLATION LIMIT = 75.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9542E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1244
 HT FLOW CONVERGENCE VALUE= .1254E-01 CRITERION= .9392E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 31 SUBSTEP 14 COMPLETED. CUM ITER = 1091
 *** TIME = .295064E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9487E-05 OSCILLATION LIMIT = 74.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9509E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1254

HT FLOW CONVERGENCE VALUE= .1256E-01 CRITERION= .9380E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 15 COMPLETED. CUM ITER = 1092
 *** TIME = .295853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9605E-05 OSCILLATION LIMIT = 75.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9499E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1245
 HT FLOW CONVERGENCE VALUE= .1249E-01 CRITERION= .9349E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 16 COMPLETED. CUM ITER = 1093
 *** TIME = .296641E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9492E-05 OSCILLATION LIMIT = 74.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9466E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1254
 HT FLOW CONVERGENCE VALUE= .1250E-01 CRITERION= .9337E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 17 COMPLETED. CUM ITER = 1094
 *** TIME = .297430E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9606E-05 OSCILLATION LIMIT = 75.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9457E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1246
 HT FLOW CONVERGENCE VALUE= .1244E-01 CRITERION= .9306E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 18 COMPLETED. CUM ITER = 1095
 *** TIME = .298219E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9497E-05 OSCILLATION LIMIT = 74.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9424E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1255
 HT FLOW CONVERGENCE VALUE= .1245E-01 CRITERION= .9294E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 19 COMPLETED. CUM ITER = 1096
 *** TIME = .299008E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9608E-05 OSCILLATION LIMIT = 75.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9414E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1246
 HT FLOW CONVERGENCE VALUE= .1239E-01 CRITERION= .9262E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 20 COMPLETED. CUM ITER = 1097
 *** TIME = .299797E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9501E-05 OSCILLATION LIMIT = 74.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9381E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1255
 HT FLOW CONVERGENCE VALUE= .1240E-01 CRITERION= .9250E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 21 COMPLETED. CUM ITER = 1098
 *** TIME = .300586E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9609E-05 OSCILLATION LIMIT = 75.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9371E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1247
 HT FLOW CONVERGENCE VALUE= .1234E-01 CRITERION= .9219E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 22 COMPLETED. CUM ITER = 1099
 *** TIME = .301375E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9506E-05 OSCILLATION LIMIT = 74.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9338E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1256
 HT FLOW CONVERGENCE VALUE= .1235E-01 CRITERION= .9207E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 23 COMPLETED. CUM ITER = 1100
 *** TIME = .302164E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9611E-05 OSCILLATION LIMIT = 75.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9329E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1248
 HT FLOW CONVERGENCE VALUE= .1229E-01 CRITERION= .9176E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 24 COMPLETED. CUM ITER = 1101
 *** TIME = .302953E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9510E-05 OSCILLATION LIMIT = 75.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9296E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1256
 HT FLOW CONVERGENCE VALUE= .1229E-01 CRITERION= .9164E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 25 COMPLETED. CUM ITER = 1102
 *** TIME = .303742E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9613E-05 OSCILLATION LIMIT = 75.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9286E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1249
 HT FLOW CONVERGENCE VALUE= .1223E-01 CRITERION= .9133E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 26 COMPLETED. CUM ITER = 1103
 *** TIME = .304531E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9514E-05 OSCILLATION LIMIT = 75.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9253E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1257
 HT FLOW CONVERGENCE VALUE= .1224E-01 CRITERION= .9121E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 27 COMPLETED. CUM ITER = 1104
 *** TIME = .305320E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9615E-05 OSCILLATION LIMIT = 75.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9243E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1249
 HT FLOW CONVERGENCE VALUE= .1218E-01 CRITERION= .9089E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 28 COMPLETED. CUM ITER = 1105
 *** TIME = .306109E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9519E-05 OSCILLATION LIMIT = 75.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9210E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1257
 HT FLOW CONVERGENCE VALUE= .1219E-01 CRITERION= .9077E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 29 COMPLETED. CUM ITER = 1106
 *** TIME = .306898E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9616E-05 OSCILLATION LIMIT = 75.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9201E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1250
 HT FLOW CONVERGENCE VALUE= .1213E-01 CRITERION= .9046E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 30 COMPLETED. CUM ITER = 1107
 *** TIME = .307687E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9523E-05 OSCILLATION LIMIT = 75.13

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9168E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1258
 HT FLOW CONVERGENCE VALUE= .1213E-01 CRITERION= .9034E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 31 COMPLETED. CUM ITER = 1108
 *** TIME = .308476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9618E-05 OSCILLATION LIMIT = 75.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9158E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1251
 HT FLOW CONVERGENCE VALUE= .1208E-01 CRITERION= .9003E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 32 COMPLETED. CUM ITER = 1109
 *** TIME = .309264E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9527E-05 OSCILLATION LIMIT = 75.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9125E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1258
 HT FLOW CONVERGENCE VALUE= .1208E-01 CRITERION= .8991E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 33 COMPLETED. CUM ITER = 1110
 *** TIME = .310053E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9620E-05 OSCILLATION LIMIT = 75.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9116E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1252
 HT FLOW CONVERGENCE VALUE= .1203E-01 CRITERION= .8960E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 34 COMPLETED. CUM ITER = 1111
 *** TIME = .310842E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9532E-05 OSCILLATION LIMIT = 75.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9082E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1259
 HT FLOW CONVERGENCE VALUE= .1203E-01 CRITERION= .8948E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 35 COMPLETED. CUM ITER = 1112
 *** TIME = .311631E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9622E-05 OSCILLATION LIMIT = 75.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9073E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1252
 HT FLOW CONVERGENCE VALUE= .1198E-01 CRITERION= .8916E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 36 COMPLETED. CUM ITER = 1113
 *** TIME = .312420E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9536E-05 OSCILLATION LIMIT = 75.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .9040E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1259
 HT FLOW CONVERGENCE VALUE= .1198E-01 CRITERION= .8904E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 37 COMPLETED. CUM ITER = 1114
 *** TIME = .313209E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9624E-05 OSCILLATION LIMIT = 75.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .9030E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1253
 HT FLOW CONVERGENCE VALUE= .1193E-01 CRITERION= .8873E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 38 COMPLETED. CUM ITER = 1115

*** TIME = .313998E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9540E-05 OSCILLATION LIMIT = 75.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.86 CRITERION= .8997E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1260
 HT FLOW CONVERGENCE VALUE= .1192E-01 CRITERION= .8861E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 39 COMPLETED. CUM ITER = 1116
 *** TIME = .314787E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9626E-05 OSCILLATION LIMIT = 75.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.15 CRITERION= .8988E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1254
 HT FLOW CONVERGENCE VALUE= .1187E-01 CRITERION= .8830E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 40 COMPLETED. CUM ITER = 1117
 *** TIME = .315576E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9544E-05 OSCILLATION LIMIT = 75.30

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:29:19 JUN 20, 1995 CP= 61294.770
 FOR SUPPORT CALL ROBERT BANNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 80.90 CRITERION= .1198
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6060
 HT FLOW CONVERGENCE VALUE= .5876E-01 CRITERION= .8746E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 1118
 *** TIME = .323465E+10 TIME INC = .788940E+08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 81.19 CRITERION= .1193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5813
 HT FLOW CONVERGENCE VALUE= .5811E-01 CRITERION= .8643E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 1119
 *** TIME = .331355E+10 TIME INC = .788940E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 243.0 CRITERION= .2579
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.808
 HT FLOW CONVERGENCE VALUE= .1712 CRITERION= .8373E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8593E-01
 HT FLOW CONVERGENCE VALUE= .3352E-02 CRITERION= .8373E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 1121
 *** TIME = .355023E+10 TIME INC = .236682E+09
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 243.3 CRITERION= .2572
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.841
 HT FLOW CONVERGENCE VALUE= .1659 CRITERION= .8084E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8441E-01
 HT FLOW CONVERGENCE VALUE= .3186E-02 CRITERION= .8084E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 1123
 *** TIME = .378691E+10 TIME INC = .236682E+09
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 648.3 CRITERION= .6533

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.919
 HT FLOW CONVERGENCE VALUE= .3748 CRITERION= .7345E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2047
 HT FLOW CONVERGENCE VALUE= .6908E-02 CRITERION= .7344E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 1125
 *** TIME = .441806E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 648.6 CRITERION= .6527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.947
 HT FLOW CONVERGENCE VALUE= .3386 CRITERION= .6585E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1862
 HT FLOW CONVERGENCE VALUE= .5582E-02 CRITERION= .6584E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 1127
 *** TIME = .504922E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 648.4 CRITERION= .6518
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -4.976
 HT FLOW CONVERGENCE VALUE= .3179 CRITERION= .5842E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1676
 HT FLOW CONVERGENCE VALUE= .4346E-02 CRITERION= .5841E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 1129
 *** TIME = .568037E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 648.8 CRITERION= .6513
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.001
 HT FLOW CONVERGENCE VALUE= .2711 CRITERION= .5078E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1480
 HT FLOW CONVERGENCE VALUE= .3144E-02 CRITERION= .5077E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 1131
 *** TIME = .631152E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:39:25 JUN 20, 1995 CP= 61891.850
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 279.8 CRITERION= .2845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.830
 HT FLOW CONVERGENCE VALUE= .1040 CRITERION= .4838E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5406E-01
 HT FLOW CONVERGENCE VALUE= .1158E-02 CRITERION= .4838E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 1133
 *** TIME = .694267E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 280.1 CRITERION= .2842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.830
 HT FLOW CONVERGENCE VALUE= .1004 CRITERION= .4581E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5088E-01
 HT FLOW CONVERGENCE VALUE= .1026E-02 CRITERION= .4581E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 1135
 *** TIME = .757382E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 279.9 CRITERION= .2836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.835

HT FLOW CONVERGENCE VALUE= .9561E-01 CRITERION= .4342E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4772E-01
 HT FLOW CONVERGENCE VALUE= .8902E-03 CRITERION= .4342E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 1137
 *** TIME = .820498E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 280.2 CRITERION= .2834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.836
 HT FLOW CONVERGENCE VALUE= .9001E-01 CRITERION= .4084E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4391E-01
 HT FLOW CONVERGENCE VALUE= .7860E-03 CRITERION= .4084E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 1139
 *** TIME = .883613E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 279.9 CRITERION= .2829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.842
 HT FLOW CONVERGENCE VALUE= .8498E-01 CRITERION= .3844E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4052E-01
 HT FLOW CONVERGENCE VALUE= .6920E-03 CRITERION= .3844E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 1141
 *** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:46:18 JUN 20, 1995 CP= 62299.040
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 162.2 CRITERION= .1666
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.044
 HT FLOW CONVERGENCE VALUE= .4733E-01 CRITERION= .3696E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2225E-01
 HT FLOW CONVERGENCE VALUE= .3752E-03 CRITERION= .3696E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 1143
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 161.9 CRITERION= .1661
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.047
 HT FLOW CONVERGENCE VALUE= .4567E-01 CRITERION= .3566E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2135E-01
 HT FLOW CONVERGENCE VALUE= .3481E-03 CRITERION= .3566E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 1145
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 162.2 CRITERION= .1660
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.046
 HT FLOW CONVERGENCE VALUE= .4391E-01 CRITERION= .3417E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2037E-01
 HT FLOW CONVERGENCE VALUE= .3240E-03 CRITERION= .3417E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 1147
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 161.9 CRITERION= .1655
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.049
 HT FLOW CONVERGENCE VALUE= .4226E-01 CRITERION= .3287E-01

EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1953E-01
 HT FLOW CONVERGENCE VALUE= .2999E-03 CRITERION= .3287E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 1149
 *** TIME = .119919E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 162.2 CRITERION= .1654
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.048
 HT FLOW CONVERGENCE VALUE= .4046E-01 CRITERION= .3139E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1872E-01
 HT FLOW CONVERGENCE VALUE= .2756E-03 CRITERION= .3139E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 1151
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:53:09 JUN 20, 1995 CP= 62705.690
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 119.7 CRITERION= .1238
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7172
 HT FLOW CONVERGENCE VALUE= .2808E-01 CRITERION= .3058E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 1152
 *** TIME = .132542E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 120.0 CRITERION= .1238
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7027
 HT FLOW CONVERGENCE VALUE= .2709E-01 CRITERION= .2960E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 1153
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 119.7 CRITERION= .1234
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7060
 HT FLOW CONVERGENCE VALUE= .2633E-01 CRITERION= .2879E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 1154
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 120.0 CRITERION= .1234
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7045
 HT FLOW CONVERGENCE VALUE= .2548E-01 CRITERION= .2781E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 1155
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 119.8 CRITERION= .1230
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7077
 HT FLOW CONVERGENCE VALUE= .2472E-01 CRITERION= .2700E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 1156
 *** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:57:51 JUN 20, 1995 CP= 62983.430

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 119.0 CRITERION= .1219
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6132
HT FLOW CONVERGENCE VALUE= .2242E-01 CRITERION= .2621E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 1157
*** TIME = .164100E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 118.7 CRITERION= .1216
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6172
HT FLOW CONVERGENCE VALUE= .2188E-01 CRITERION= .2561E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 1158
*** TIME = .170411E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 119.0 CRITERION= .1216
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6154
HT FLOW CONVERGENCE VALUE= .2125E-01 CRITERION= .2482E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 1159
*** TIME = .176723E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 118.7 CRITERION= .1213
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6184
HT FLOW CONVERGENCE VALUE= .2072E-01 CRITERION= .2422E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 1160
*** TIME = .183034E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 119.0 CRITERION= .1213
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6166
HT FLOW CONVERGENCE VALUE= .2011E-01 CRITERION= .2343E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 1161
*** TIME = .189346E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:02:33 JUN 20, 1995 CP= 63260.900
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 102.0 CRITERION= .1048
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4983
HT FLOW CONVERGENCE VALUE= .1648E-01 CRITERION= .2300E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 1162
*** TIME = .195657E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.3 CRITERION= .1048
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4979
HT FLOW CONVERGENCE VALUE= .1609E-01 CRITERION= .2238E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1163
*** TIME = .201969E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.0 CRITERION= .1045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5006
 HT FLOW CONVERGENCE VALUE= .1575E-01 CRITERION= .2195E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1164
 *** TIME = .208280E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.3 CRITERION= .1046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4986
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .2133E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1165
 *** TIME = .214592E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.0 CRITERION= .1043
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5014
 HT FLOW CONVERGENCE VALUE= .1501E-01 CRITERION= .2089E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1166
 *** TIME = .220903E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:07:15 JUN 20, 1995 CP= 63538.220
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 90.67 CRITERION= .9298E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4320
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .2036E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1167
 *** TIME = .227215E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 90.39 CRITERION= .9272E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4355
 HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .2000E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1168
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 90.68 CRITERION= .9278E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4334
 HT FLOW CONVERGENCE VALUE= .1233E-01 CRITERION= .1947E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1169
 *** TIME = .239838E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 90.39 CRITERION= .9253E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4361
 HT FLOW CONVERGENCE VALUE= .1208E-01 CRITERION= .1911E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1170
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 90.68 CRITERION= .9260E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4340
 HT FLOW CONVERGENCE VALUE= .1178E-01 CRITERION= .1858E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1171

*** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:11:57 JUN 20, 1995 CP= 63816.270
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 79.90 CRITERION= .8210E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3678
HT FLOW CONVERGENCE VALUE= .1005E-01 CRITERION= .1831E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1172
*** TIME = .258772E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 80.20 CRITERION= .8219E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3663
HT FLOW CONVERGENCE VALUE= .9835E-02 CRITERION= .1787E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1173
*** TIME = .265084E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 79.91 CRITERION= .8195E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3689
HT FLOW CONVERGENCE VALUE= .9669E-02 CRITERION= .1760E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1174
*** TIME = .271395E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 80.20 CRITERION= .8203E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3667
HT FLOW CONVERGENCE VALUE= .9450E-02 CRITERION= .1716E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1175
*** TIME = .277707E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 79.91 CRITERION= .8180E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3693
HT FLOW CONVERGENCE VALUE= .9283E-02 CRITERION= .1689E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1176
*** TIME = .284018E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:16:38 JUN 20, 1995 CP= 64093.540
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 69.11 CRITERION= .7107E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3082
HT FLOW CONVERGENCE VALUE= .7768E-02 CRITERION= .1651E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1177
*** TIME = .290330E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 68.82 CRITERION= .7084E-01

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3114
 HT FLOW CONVERGENCE VALUE= .7662E-02 CRITERION= .1631E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1178
 *** TIME = .296641E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 69.11 CRITERION= .7094E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3091
 HT FLOW CONVERGENCE VALUE= .7503E-02 CRITERION= .1593E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1179
 *** TIME = .302953E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 68.82 CRITERION= .7071E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3116
 HT FLOW CONVERGENCE VALUE= .7392E-02 CRITERION= .1573E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1180
 *** TIME = .309264E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 69.12 CRITERION= .7081E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3094
 HT FLOW CONVERGENCE VALUE= .7233E-02 CRITERION= .1535E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1181
 *** TIME = .315576E+11 TIME INC = .631152E+09

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 64369.260

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44w.db
 FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:21:24 JUN 20, 1995 CP= 64375.050
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2 NSOL 1136 TEMP peakclad 77.11 .3156E+11 230.9 .3156E+08

*GET TMTMAX FROM VARI 2 ITEM=EXTR TMAX VALUE= 31557631.6

***** ROUTINE COMPLETED ***** CP = 64375.300

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:21:26 JUN 20, 1995 CP= 64375.330
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****
Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+08

SET COMMAND GOT LOAD STEP= 13 SUBSTEP= 40 CUMULATIVE ITERATION= 397
TIME/FREQUENCY= .31558E+08

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (1.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=

44 BWR UCF/WP at Time of Peak Temp. (1.000001 years)

*** WARNING *** CP= 64406.420 TIME= 06:22:02
The selected element set contains mixed materials.
This could invalidate error estimation.
Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 757
TIME/FREQUENCY= .31558E+09

TITLE=
44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 108.58 BY 1.1107 TO 249.64

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 10 years

*** WARNING *** CP= 64443.550 TIME= 06:22:40
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 917
TIME/FREQUENCY= .15779E+10

TITLE=
44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 108.58 BY 1.1107 TO 249.64

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 64481.100 TIME= 06:23:17
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 40 CUMULATIVE ITERATION= 1117
TIME/FREQUENCY= .31558E+10

TITLE=
44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 108.58 BY 1.1107 TO 249.64

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 64518.380 TIME= 06:23:55
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP = 64526.720

Set some needed variable values:

PARAMETER DATM = .9000000E-01

PARAMETER DAT1 = .2500000

PARAMETER DAT2 = .4100000

PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
Save profile from center to edge

Variable Legend: A01i000

c = center of assembly

h = halfway between center and tube

s = inside structural stainless tube layer

t = stainless tube cladding

g = tube guide

i = inner barrier of DC

o = outer barrier of DC

= ID number of assembly (01 is center)

i = side of assembly toward center of WP

o = side of assembly toward edge of WP

000 = profile center down

045 = profile 45 deg down

090 = profile center side

135 = profile 45 deg up

180 = profile center up

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:24:03 JUN 20, 1995 CP= 64526.740
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts1i000

VARIABLE 3 IS AT NODE 1094 ITEM= TEMP COMP= NAME= t01i000

VARIABLE 4 IS AT NODE 1101 ITEM= TEMP COMP= NAME= s01i000

VARIABLE 5 IS AT NODE 1138 ITEM= TEMP COMP= NAME= h01i000

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i000
 VARIABLE 7 IS AT NODE 1134 ITEM= TEMP COMP= NAME= h01o000
 VARIABLE 8 IS AT NODE 1055 ITEM= TEMP COMP= NAME= s01o000
 VARIABLE 9 IS AT NODE 1047 ITEM= TEMP COMP= NAME= t01o000
 VARIABLE 10 IS AT NODE 1246 ITEM= TEMP COMP= NAME= s09i000
 VARIABLE 11 IS AT NODE 1283 ITEM= TEMP COMP= NAME= h09i000
 VARIABLE 12 IS AT NODE 1281 ITEM= TEMP COMP= NAME= c09i000
 VARIABLE 13 IS AT NODE 1279 ITEM= TEMP COMP= NAME= h09o000
 VARIABLE 14 IS AT NODE 1200 ITEM= TEMP COMP= NAME= s09o000
 VARIABLE 15 IS AT NODE 1192 ITEM= TEMP COMP= NAME= t09o000
 VARIABLE 16 IS AT NODE 1391 ITEM= TEMP COMP= NAME= s15i000
 VARIABLE 17 IS AT NODE 1428 ITEM= TEMP COMP= NAME= h15i000
 VARIABLE 18 IS AT NODE 1426 ITEM= TEMP COMP= NAME= c15i000
 VARIABLE 19 IS AT NODE 1424 ITEM= TEMP COMP= NAME= h15o000
 VARIABLE 20 IS AT NODE 1345 ITEM= TEMP COMP= NAME= s15o000
 VARIABLE 21 IS AT NODE 1337 ITEM= TEMP COMP= NAME= t15o000
 VARIABLE 22 IS AT NODE 1536 ITEM= TEMP COMP= NAME= s21i000
 VARIABLE 23 IS AT NODE 1573 ITEM= TEMP COMP= NAME= h21i000
 VARIABLE 24 IS AT NODE 1571 ITEM= TEMP COMP= NAME= c21i000
 VARIABLE 25 IS AT NODE 1569 ITEM= TEMP COMP= NAME= h21o000
 VARIABLE 26 IS AT NODE 1490 ITEM= TEMP COMP= NAME= s21o000
 VARIABLE 27 IS AT NODE 1482 ITEM= TEMP COMP= NAME= t21o000
 VARIABLE 28 IS AT NODE 4217 ITEM= TEMP COMP= NAME= i21i000
 VARIABLE 29 IS AT NODE 4207 ITEM= TEMP COMP= NAME= i21o000
 VARIABLE 30 IS AT NODE 4437 ITEM= TEMP COMP= NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	NSOL	3544 TEMP	ts1i000	75.70	.3156E+11	207.6	.3156E+08
3	NSOL	1094 TEMP	t01i000	75.70	.3156E+11	207.6	.3156E+08
4	NSOL	1101 TEMP	s01i000	75.70	.3156E+11	207.7	.3156E+08
5	NSOL	1138 TEMP	h01i000	76.62	.3156E+11	223.0	.3156E+08
6	NSOL	1136 TEMP	c01i000	77.11	.3156E+11	230.9	.3156E+08
7	NSOL	1134 TEMP	h01o000	77.26	.3156E+11	233.7	.3156E+08
8	NSOL	1055 TEMP	s01o000	77.06	.3156E+11	231.3	.3156E+08
9	NSOL	1047 TEMP	t01o000	77.06	.3156E+11	231.3	.3156E+08
10	NSOL	1246 TEMP	s09i000	77.07	.3156E+11	231.3	.3156E+08
11	NSOL	1283 TEMP	h09i000	77.44	.3156E+11	235.9	.3156E+08
12	NSOL	1281 TEMP	c09i000	77.49	.3156E+11	235.8	.3156E+08
13	NSOL	1279 TEMP	h09o000	77.26	.3156E+11	231.4	.3156E+08
14	NSOL	1200 TEMP	s09o000	76.70	.3156E+11	222.1	.3156E+08
15	NSOL	1192 TEMP	t09o000	76.69	.3156E+11	222.1	.3156E+08

16	NSOL	1391	TEMP	s15i000	76.69	.3156E+11	222.0	.3156E+08
17	NSOL	1428	TEMP	h15i000	76.75	.3156E+11	220.7	.3156E+08
18	NSOL	1426	TEMP	c15i000	76.48	.3156E+11	214.5	.3156E+08
19	NSOL	1424	TEMP	h15o000	75.93	.3156E+11	203.8	.6312E+08
20	NSOL	1345	TEMP	s15o000	75.07	.3156E+11	188.2	.6312E+08
21	NSOL	1337	TEMP	t15o000	75.06	.3156E+11	188.2	.6312E+08
22	NSOL	1536	TEMP	s21i000	75.06	.3156E+11	188.2	.6312E+08
23	NSOL	1573	TEMP	h21i000	74.99	.3156E+11	184.9	.6312E+08
24	NSOL	1571	TEMP	c21i000	74.62	.3156E+11	177.1	.6312E+08
25	NSOL	1569	TEMP	h21o000	73.97	.3156E+11	164.4	.9467E+08
26	NSOL	1490	TEMP	s21o000	66.48	.1000E-05	144.4	.1262E+09
27	NSOL	1482	TEMP	t21o000	66.37	.1000E-05	144.3	.1262E+09
28	NSOL	4217	TEMP	i21i000	29.31	.1000E-05	121.8	.2525E+09
29	NSOL	4207	TEMP	i21o000	28.35	.1000E-05	120.9	.2525E+09
30	NSOL	4437	TEMP	o21o000	26.14	.1000E-05	119.3	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:07 JUN 20, 1995 CP= 64530.600
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.526	176.537	176.639	194.050	203.085	206.138
31.558	176.526	176.537	176.639	194.050	203.085	206.137
.31558E+07	198.600	198.610	198.710	214.944	223.400	226.315
.63116E+07	202.183	202.194	202.292	218.306	226.660	229.541
.94673E+07	203.983	203.994	204.092	219.951	228.228	231.084
.12623E+08	205.134	205.145	205.243	220.979	229.196	232.032
.15779E+08	205.933	205.944	206.041	221.675	229.840	232.659
.18935E+08	206.499	206.509	206.606	222.148	230.268	233.071
.22090E+08	206.918	206.929	207.025	222.485	230.564	233.352
.25246E+08	207.228	207.239	207.334	222.719	230.759	233.535
.28402E+08	207.452	207.463	207.558	222.872	230.876	233.639
.31558E+08	207.612	207.623	207.717	222.965	230.935	233.686
.63115E+08	207.596	207.607	207.698	222.425	230.130	232.786
.94673E+08	206.347	206.357	206.446	220.776	228.276	230.859
.12623E+09	204.775	204.784	204.871	218.869	226.197	228.718
.15779E+09	203.228	203.237	203.322	217.040	224.222	226.690
.18935E+09	201.417	201.426	201.508	214.942	221.977	224.392
.22090E+09	199.794	199.803	199.883	213.072	219.979	222.347
.25246E+09	198.341	198.350	198.429	211.383	218.168	220.493
.28402E+09	196.327	196.335	196.412	209.169	215.850	218.135
.31558E+09	194.725	194.734	194.810	207.393	213.985	216.237
.63115E+09	179.397	179.404	179.468	190.322	196.030	197.968
.94673E+09	166.439	166.445	166.499	175.995	180.989	182.672
.12623E+10	155.018	155.023	155.069	163.490	167.915	169.391
.15779E+10	145.485	145.490	145.530	153.016	156.949	158.247
.18935E+10	137.803	137.806	137.842	144.551	148.083	149.243
.22090E+10	131.434	131.438	131.469	137.529	140.720	141.765
.25246E+10	125.748	125.751	125.779	131.302	134.210	135.159
.28402E+10	121.350	121.353	121.379	126.469	129.149	130.022
.31558E+10	117.466	117.469	117.492	122.183	124.654	125.456
.63115E+10	98.8452	98.8466	98.8605	101.719	103.227	103.709
.94673E+10	91.7864	91.7874	91.7980	94.0004	95.1631	95.5335
.12623E+11	87.7510	87.7519	87.7605	89.5837	90.5461	90.8515
.15779E+11	84.9403	84.9410	84.9484	86.5211	87.3513	87.6141
.18935E+11	82.4218	82.4225	82.4289	83.8082	84.5360	84.7658
.22090E+11	80.3536	80.3541	80.3599	81.5918	82.2419	82.4464
.25246E+11	78.5489	78.5494	78.5546	79.6606	80.2441	80.4274
.28402E+11	77.0045	77.0049	77.0096	78.0145	78.5446	78.7108
.31558E+11	75.6963	75.6967	75.7010	76.6230	77.1093	77.2616

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:07 JUN 20, 1995 CP= 64530.610
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.243	203.241	203.256	208.865	208.934	204.166
.31558E+07	203.243	203.241	203.256	208.865	208.934	204.166
.31558E+07	223.748	223.746	223.760	228.791	228.722	224.184
.63116E+07	227.011	227.009	227.023	231.958	231.862	227.349
.94673E+07	228.577	228.575	228.589	233.463	233.351	228.863
.12623E+08	229.543	229.541	229.555	234.381	234.259	229.793
.15779E+08	230.186	230.183	230.197	234.986	234.857	230.410
.18935E+08	230.611	230.609	230.623	235.379	235.245	230.818
.22090E+08	230.904	230.902	230.916	235.644	235.507	231.097
.25246E+08	231.097	231.095	231.108	235.812	235.672	231.279
.28402E+08	231.212	231.210	231.223	235.904	235.762	231.385
.31558E+08	231.268	231.266	231.279	235.939	235.795	231.435
.63115E+08	230.440	230.438	230.450	234.956	234.813	230.589
.94673E+08	228.565	228.563	228.575	232.974	232.842	228.732
.12623E+09	226.468	226.466	226.478	230.792	230.672	226.661
.15779E+09	224.476	224.474	224.486	228.730	228.622	224.696
.18935E+09	222.214	222.212	222.224	226.399	226.304	222.466
.22090E+09	220.201	220.199	220.210	224.325	224.242	220.480
.25246E+09	218.377	218.375	218.386	222.442	222.370	218.679
.28402E+09	216.042	216.040	216.051	220.063	220.003	216.377
.31558E+09	214.165	214.163	214.174	218.148	218.098	214.526
.63115E+09	196.123	196.122	196.131	199.688	199.720	196.676
.94673E+09	181.016	181.015	181.023	184.225	184.312	181.685
.12623E+10	167.876	167.875	167.883	170.804	170.931	168.629
.15779E+10	156.864	156.863	156.869	159.527	159.676	157.649
.18935E+10	147.981	147.980	147.986	150.410	150.568	148.762
.22090E+10	140.613	140.612	140.617	142.834	142.994	141.374
.25246E+10	134.099	134.098	134.103	136.146	136.307	134.839
.28402E+10	129.037	129.036	129.040	130.940	131.099	129.753
.31558E+10	124.542	124.542	124.546	126.311	126.466	125.231
.63115E+10	103.129	103.129	103.131	104.250	104.372	103.633
.94673E+10	95.0805	95.0802	95.0821	95.9559	96.0561	95.4896
.12623E+11	90.4730	90.4728	90.4743	91.2035	91.2898	90.8223
.15779E+11	87.2859	87.2858	87.2871	87.9190	87.9951	87.5926
.18935E+11	84.4760	84.4758	84.4770	85.0338	85.1019	84.7495
.22090E+11	82.1862	82.1860	82.1870	82.6865	82.7486	82.4342
.25246E+11	80.1927	80.1926	80.1935	80.6435	80.7001	80.4183
.28402E+11	78.4967	78.4966	78.4974	78.9076	78.9598	78.7041
.31558E+11	77.0647	77.0646	77.0654	77.4426	77.4912	77.2570

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:07 JUN 20, 1995 CP= 64530.620
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09o000	1192 TEMP t09o000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15o000
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.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.643	193.606	193.587	192.686	186.117	174.384
31.558	193.643	193.606	193.587	192.685	186.117	174.384
.31558E+07	214.351	214.314	214.294	213.061	206.606	195.377
.63116E+07	217.615	217.578	217.558	216.275	209.841	198.697
.94673E+07	219.204	219.167	219.148	217.840	211.431	200.361
.12623E+08	220.196	220.159	220.139	218.817	212.433	201.426
.15779E+08	220.867	220.830	220.811	219.480	213.120	202.170
.18935E+08	221.322	221.286	221.266	219.930	213.595	202.697
.22090E+08	221.646	221.610	221.590	220.251	213.939	203.090
.25246E+08	221.869	221.833	221.813	220.474	214.185	203.382
.28402E+08	222.015	221.979	221.960	220.620	214.354	203.596
.31558E+08	222.102	222.066	222.047	220.709	214.466	203.750
.63115E+08	221.557	221.523	221.504	220.202	214.157	203.797
.94673E+08	219.938	219.905	219.887	218.633	212.761	202.692
.12623E+09	218.070	218.038	218.020	216.816	211.096	201.277
.15779E+09	216.278	216.246	216.229	215.070	209.481	199.878
.18935E+09	214.224	214.193	214.176	213.066	207.613	198.230
.22090E+09	212.390	212.360	212.344	211.276	205.941	196.749
.25246E+09	210.734	210.704	210.688	209.659	204.434	195.424
.28402E+09	208.557	208.528	208.513	207.526	202.404	193.558
.31558E+09	206.814	206.785	206.770	205.818	200.781	192.076
.63115E+09	190.034	190.011	189.999	189.345	185.145	177.787
.94673E+09	175.885	175.865	175.856	175.427	171.874	165.552
.12623E+10	163.488	163.472	163.464	163.204	160.150	154.630
.15779E+10	153.080	153.066	153.059	152.913	150.262	145.417
.18935E+10	144.670	144.657	144.652	144.573	142.242	137.941
.22090E+10	137.683	137.672	137.667	137.637	135.565	131.713
.25246E+10	131.478	131.468	131.463	131.470	129.610	126.125
.28402E+10	126.657	126.648	126.644	126.676	124.982	121.789
.31558E+10	122.380	122.372	122.368	122.418	120.873	117.946
.63115E+10	101.897	101.892	101.890	101.981	101.088	99.3466
.94673E+10	94.1508	94.1473	94.1459	94.2315	93.5549	92.2237
.12623E+11	89.7133	89.7104	89.7093	89.7884	89.2343	88.1374
.15779E+11	86.6360	86.6335	86.6326	86.7049	86.2301	85.2866
.18935E+11	83.9100	83.9078	83.9070	83.9743	83.5606	82.7353
.22090E+11	81.6840	81.6821	81.6814	81.7445	81.3772	80.6417
.25246E+11	79.7446	79.7429	79.7423	79.8013	79.4732	78.8142
.28402E+11	78.0920	78.0904	78.0899	78.1453	77.8487	77.2512
.31558E+11	76.6955	76.6941	76.6935	76.7460	76.4750	75.9278

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:07 JUN 20, 1995 CP= 64530.630
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0556
.20000E-05	156.284	156.223	156.186	153.036	144.171	129.350
31.558	156.284	156.223	156.186	153.036	144.170	129.350
.31558E+07	178.378	178.318	178.280	174.938	166.449	152.460
.63116E+07	181.867	181.807	181.769	178.400	169.967	156.119
.94673E+07	183.663	183.602	183.565	180.187	171.804	158.066
.12623E+08	184.836	184.776	184.738	181.361	173.022	159.375
.15779E+08	185.675	185.615	185.577	182.204	173.906	160.340
.18935E+08	186.288	186.228	186.191	182.823	174.565	161.072
.22090E+08	186.762	186.703	186.665	183.306	175.084	161.661
.25246E+08	187.130	187.071	187.034	183.682	175.497	162.138
.28402E+08	187.416	187.357	187.320	183.978	175.827	162.530
.31558E+08	187.639	187.580	187.543	184.212	176.094	162.857
.63115E+08	188.247	188.191	188.155	184.926	177.091	164.337
.94673E+08	187.592	187.537	187.503	184.375	176.776	164.412

.12623E+09	186.563	186.510	186.476	183.441	176.047	164.017
.15779E+09	185.492	185.440	185.407	182.455	175.237	163.491
.18935E+09	184.179	184.129	184.097	181.231	174.194	162.737
.22090E+09	182.989	182.940	182.909	180.118	173.238	162.031
.25246E+09	181.937	181.889	181.859	179.138	172.404	161.432
.28402E+09	180.311	180.264	180.234	177.584	170.984	160.219
.31558E+09	179.032	178.986	178.957	176.365	169.877	159.289
.63115E+09	166.703	166.665	166.641	164.587	159.165	150.253
.94673E+09	155.975	155.943	155.924	154.262	149.641	142.009
.12623E+10	146.224	146.196	146.180	144.803	140.800	134.159
.15779E+10	138.023	138.000	137.986	136.832	133.345	127.536
.18935E+10	131.359	131.338	131.326	130.342	127.264	122.116
.22090E+10	125.801	125.782	125.772	124.921	122.178	117.574
.25246E+10	120.763	120.747	120.738	119.995	117.524	113.364
.28402E+10	116.867	116.852	116.843	116.183	113.928	110.121
.31558E+10	113.426	113.413	113.405	112.817	110.757	107.271
.63115E+10	96.6364	96.6287	96.6243	96.3197	95.1145	93.0539
.94673E+10	90.1460	90.1402	90.1369	89.9176	89.0028	87.4318
.12623E+11	86.4219	86.4172	86.4146	86.2407	85.4900	84.1969
.15779E+11	83.8091	83.8050	83.8028	83.6565	83.0120	81.9002
.18935E+11	81.4411	81.4376	81.4357	81.3110	80.7486	79.7766
.22090E+11	79.4871	79.4839	79.4822	79.3738	78.8737	78.0080
.25246E+11	77.7787	77.7759	77.7743	77.6792	77.2320	76.4566
.28402E+11	76.3112	76.3087	76.3073	76.2227	75.8179	75.1151
.31558E+11	75.0662	75.0639	75.0626	74.9865	74.6163	73.9728

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:07 JUN 20, 1995 CP= 64530.650
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21i000	i21o000	o21o000
.10000E-05	66.4812	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.799	104.684	72.1432	71.0900	68.8610
31.558	104.799	104.684	72.1431	71.0900	68.8610
.31558E+07	129.408	129.292	100.066	98.9814	96.8307
.63116E+07	133.313	133.197	104.501	103.416	101.279
.94673E+07	135.459	135.343	107.017	105.936	103.816
.12623E+08	136.932	136.817	108.784	107.706	105.600
.15779E+08	138.040	137.926	110.140	109.067	106.974
.18935E+08	138.902	138.788	111.220	110.150	108.070
.22090E+08	139.611	139.497	112.126	111.060	108.991
.25246E+08	140.202	140.089	112.898	111.836	109.778
.28402E+08	140.702	140.589	113.568	112.510	110.462
.31558E+08	141.131	141.019	114.157	113.103	111.065
.63115E+08	143.447	143.339	117.696	116.678	114.723
.94673E+08	144.189	144.083	119.359	118.372	116.484
.12623E+09	144.359	144.257	120.287	119.329	117.497
.15779E+09	144.313	144.213	120.874	119.940	118.156
.18935E+09	144.046	143.949	121.237	120.328	118.594
.22090E+09	143.760	143.665	121.493	120.605	118.913
.25246E+09	143.557	143.464	121.799	120.932	119.279
.28402E+09	142.690	142.599	121.353	120.505	118.887
.31558E+09	142.054	141.965	121.076	120.245	118.656
.63115E+09	135.816	135.742	118.250	117.569	116.256
.94673E+09	129.691	129.629	114.673	114.104	112.997
.12623E+10	123.454	123.402	110.362	109.878	108.925
.15779E+10	118.183	118.138	106.719	106.304	105.479
.18935E+10	113.835	113.796	103.668	103.305	102.581
.22090E+10	110.172	110.137	101.072	100.752	100.109
.25246E+10	106.679	106.648	98.4467	98.1615	97.5859
.28402E+10	104.004	103.976	96.4659	96.2076	95.6856
.31558E+10	101.671	101.646	94.7663	94.5320	94.0581

.63115E+10	89.7566	89.7421	85.6692	85.5383	85.2693
.94673E+10	84.9191	84.9082	81.7964	81.6989	81.4969
.12623E+11	82.1292	82.1203	79.5563	79.4769	79.3123
.15779E+11	80.1227	80.1151	77.9074	77.8399	77.6990
.18935E+11	78.2227	78.2161	76.2841	76.2253	76.1029
.22090E+11	76.6239	76.6181	74.8955	74.8437	74.7351
.25246E+11	75.2170	75.2118	73.6676	73.6214	73.5247
.28402E+11	73.9912	73.9866	72.5856	72.5441	72.4566
.31558E+11	72.9437	72.9394	71.6559	71.6179	71.5383

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 64530.790 TIME= 06:24:07
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045
 VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045
 VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045
 VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045
 VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045
 VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045
 VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045
 VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045
 VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045
 VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045
 VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045
 VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045
 VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045
 VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045
 VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045
 VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045
 VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045
 VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045
 VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045
 VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045
 VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045
 VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts1i045	75.71	.3156E+11	208.0	.3156E+08
3 NSOL	1017 TEMP	t01i045	75.71	.3156E+11	208.0	.3156E+08
4 NSOL	1025 TEMP	s01i045	75.71	.3156E+11	208.0	.3156E+08
5 NSOL	1124 TEMP	h01i045	76.34	.3156E+11	218.4	.3156E+08
6 NSOL	1136 TEMP	c01i045	77.11	.3156E+11	230.9	.3156E+08
7 NSOL	1148 TEMP	h01o045	77.53	.3156E+11	238.3	.3156E+08
8 NSOL	1051 TEMP	s01o045	77.70	.3156E+11	241.4	.3156E+08
9 NSOL	1043 TEMP	t01o045	77.72	.3156E+11	241.7	.3156E+08
10 NSOL	2040 TEMP	s11i045	77.73	.3156E+11	242.0	.3156E+08
11 NSOL	2139 TEMP	h11i045	78.26	.3156E+11	248.6	.2840E+08
12 NSOL	2151 TEMP	c11i045	78.38	.3156E+11	248.5	.2840E+08
13 NSOL	2163 TEMP	h11o045	77.87	.3156E+11	238.9	.3156E+08
14 NSOL	2066 TEMP	s11o045	76.96	.3156E+11	222.2	.3156E+08
15 NSOL	2058 TEMP	t11o045	76.92	.3156E+11	221.5	.3156E+08
16 NSOL	2910 TEMP	s19i045	76.88	.3156E+11	220.7	.3156E+08
17 NSOL	3009 TEMP	h19i045	76.25	.3156E+11	206.7	.3156E+08
18 NSOL	3021 TEMP	c19i045	75.16	.3156E+11	185.5	.6312E+08
19 NSOL	3033 TEMP	h19o045	73.52	.3156E+11	154.8	.9467E+08
20 NSOL	2936 TEMP	s19o045	35.53	.1000E-05	124.2	.2525E+09
21 NSOL	2928 TEMP	t19o045	34.03	.1000E-05	123.3	.2525E+09
22 NSOL	4182 TEMP	i19o045	29.45	.1000E-05	120.4	.2525E+09
23 NSOL	4411 TEMP	o19o045	26.14	.1000E-05	118.3	.2525E+09
24 NSOL	2876 TEMP	c13i045	76.76	.3156E+11	216.3	.3156E+08
25 NSOL	2296 TEMP	c17i045	76.80	.3156E+11	216.7	.3156E+08
26 NSOL	1490 TEMP	s21o000	66.48	.1000E-05	144.4	.1262E+09
27 NSOL	1482 TEMP	t21o000	66.37	.1000E-05	144.3	.1262E+09
28 NSOL	4217 TEMP	i21i000	29.31	.1000E-05	121.8	.2525E+09
29 NSOL	4207 TEMP	i21o000	28.35	.1000E-05	120.9	.2525E+09
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	119.3	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	139.403	139.403	139.409	152.795	168.730	177.938
.20000E-05	176.866	176.866	176.872	188.758	203.085	211.448
31.558	176.866	176.866	176.872	188.758	203.085	211.447
.31558E+07	198.961	198.970	198.979	210.059	223.400	231.222
.63116E+07	202.543	202.553	202.562	213.488	226.660	234.387
.94673E+07	204.342	204.352	204.361	215.179	228.228	235.885
.12623E+08	205.492	205.502	205.511	216.245	229.196	236.797
.15779E+08	206.290	206.300	206.308	216.971	229.840	237.393
.18935E+08	206.854	206.863	206.872	217.472	230.268	237.779
.22090E+08	207.272	207.281	207.290	217.834	230.564	238.036
.25246E+08	207.580	207.590	207.599	218.090	230.759	238.195
.28402E+08	207.803	207.813	207.821	218.265	230.876	238.279
.31558E+08	207.962	207.971	207.980	218.377	230.935	238.305
.63115E+08	207.934	207.944	207.952	217.994	230.130	237.246
.94673E+08	206.675	206.684	206.692	216.464	228.276	235.196
.12623E+09	205.094	205.102	205.111	214.657	226.197	232.952
.15779E+09	203.539	203.548	203.556	212.911	224.222	230.837
.18935E+09	201.720	201.728	201.736	210.899	221.977	228.451
.22090E+09	200.090	200.099	200.106	209.102	219.979	226.330
.25246E+09	198.631	198.639	198.647	207.484	218.168	224.402
.28402E+09	196.610	196.618	196.626	205.328	215.850	221.983
.31558E+09	195.004	195.012	195.019	203.603	213.985	220.033
.63115E+09	179.627	179.634	179.640	187.046	196.030	201.267
.94673E+09	166.633	166.639	166.644	173.127	180.989	185.533

.12623E+10	155.183	155.189	155.193	160.947	167.915	171.915
.15779E+10	145.629	145.634	145.638	150.755	156.949	160.479
.18935E+10	137.929	137.933	137.937	142.524	148.083	151.241
.22090E+10	131.546	131.550	131.554	135.698	140.720	143.567
.25246E+10	125.848	125.852	125.855	129.633	134.210	136.800
.28402E+10	121.442	121.445	121.448	124.930	129.149	131.532
.31558E+10	117.550	117.553	117.555	120.765	124.654	126.847
.63115E+10	98.8937	98.8958	98.8973	100.855	103.227	104.551
.94673E+10	91.8234	91.8250	91.8262	93.3348	95.1631	96.1810
.12623E+11	87.7814	87.7828	87.7837	89.0331	90.5461	91.3864
.15779E+11	84.9665	84.9677	84.9685	86.0462	87.3513	88.0747
.18935E+11	82.4446	82.4456	82.4464	83.3918	84.5360	85.1691
.22090E+11	80.3739	80.3748	80.3755	81.2200	82.2419	82.8061
.25246E+11	78.5670	78.5679	78.5685	79.3269	80.2441	80.7500
.28402E+11	77.0209	77.0217	77.0222	77.7113	78.5446	79.0034
.31558E+11	75.7113	75.7121	75.7126	76.3449	77.1093	77.5299

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.880
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.225	182.618	182.986	192.562	194.134	184.165
.20000E-05	215.156	215.490	215.802	223.823	224.424	214.445
31.558	215.156	215.491	215.802	223.823	224.423	214.444
.31558E+07	234.618	234.919	235.199	242.324	242.418	232.600
.63116E+07	237.724	238.020	238.295	245.288	245.310	235.506
.94673E+07	239.181	239.473	239.745	246.647	246.628	236.858
.12623E+08	240.060	240.350	240.619	247.454	247.406	237.670
.15779E+08	240.631	240.918	241.185	247.964	247.896	238.194
.18935E+08	240.994	241.279	241.544	248.277	248.194	238.525
.22090E+08	241.230	241.514	241.777	248.469	248.374	238.738
.25246E+08	241.370	241.653	241.914	248.569	248.466	238.861
.28402E+08	241.436	241.717	241.977	248.599	248.489	238.915
.31558E+08	241.447	241.726	241.985	248.575	248.460	238.916
.63115E+08	240.262	240.531	240.781	247.147	247.014	237.743
.94673E+08	238.119	238.381	238.624	244.833	244.710	235.676
.12623E+09	235.799	236.055	236.293	242.377	242.272	233.447
.15779E+09	233.621	233.872	234.104	240.086	239.999	231.355
.18935E+09	231.172	231.418	231.646	237.525	237.460	229.004
.22090E+09	228.996	229.238	229.462	235.252	235.207	226.914
.25246E+09	227.017	227.255	227.476	233.180	233.150	225.011
.28402E+09	224.554	224.789	225.007	230.647	230.643	222.647
.31558E+09	222.568	222.800	223.015	228.599	228.613	220.738
.63115E+09	203.423	203.627	203.817	208.813	208.987	202.272
.94673E+09	187.428	187.609	187.778	192.276	192.551	186.747
.12623E+10	173.580	173.743	173.894	177.981	178.325	173.249
.15779E+10	161.937	162.083	162.219	165.926	166.312	161.851
.18935E+10	152.536	152.667	152.790	156.177	156.583	152.614
.22090E+10	144.733	144.852	144.964	148.067	148.477	144.913
.25246E+10	137.860	137.969	138.072	140.932	141.340	138.115
.28402E+10	132.507	132.608	132.703	135.363	135.764	132.809
.31558E+10	127.743	127.837	127.925	130.396	130.786	128.076
.63115E+10	105.088	105.146	105.201	106.766	107.065	105.450
.94673E+10	96.5919	96.6370	96.6795	97.9028	98.1502	96.9131
.12623E+11	91.7245	91.7619	91.7972	92.8175	93.0299	92.0102
.15779E+11	88.3654	88.3978	88.4283	89.3120	89.4995	88.6226
.18935E+11	85.4226	85.4510	85.4778	86.2565	86.4247	85.6579
.22090E+11	83.0316	83.0570	83.0810	83.7790	83.9523	83.2491
.25246E+11	80.9517	80.9745	80.9960	81.6249	81.7647	81.1529
.28402E+11	79.1862	79.2069	79.2265	79.7994	79.9284	79.3736

1 .31558E+11 77.6971 77.7161 77.7341 78.2611 78.3808 77.8730

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.900
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	165.513	164.687	163.835	149.017	123.959	83.2196
.20000E-05	196.439	195.627	194.788	179.980	156.189	119.210
31.558	196.439	195.627	194.788	179.979	156.190	119.211
.31558E+07	215.246	214.454	213.637	199.084	176.302	141.786
.63116E+07	218.247	217.459	216.646	202.153	179.547	145.473
.94673E+07	219.694	218.910	218.101	203.679	181.223	147.475
.12623E+08	220.591	219.810	219.005	204.647	182.321	148.836
.15779E+08	221.192	220.414	219.613	205.314	183.106	149.848
.18935E+08	221.594	220.820	220.021	205.781	183.681	150.627
.22090E+08	221.875	221.104	220.308	206.123	184.126	151.259
.25246E+08	222.063	221.294	220.502	206.371	184.471	151.779
.28402E+08	222.179	221.414	220.625	206.546	184.740	152.213
.31558E+08	222.242	221.479	220.693	206.666	184.950	152.579
.63115E+08	221.580	220.842	220.080	206.502	185.531	154.406
.94673E+08	219.938	219.220	218.479	205.282	184.921	154.770
.12623E+09	218.078	217.378	216.656	203.794	183.958	154.628
.15779E+09	216.304	215.619	214.913	202.340	182.955	154.319
.18935E+09	214.279	213.610	212.920	200.645	181.722	153.788
.22090E+09	212.473	211.817	211.142	199.125	180.603	153.276
.25246E+09	210.838	210.195	209.533	197.760	179.615	152.858
.28402E+09	208.715	208.085	207.435	195.887	178.081	151.817
.31558E+09	207.012	206.391	205.751	194.395	176.875	151.031
.63115E+09	190.538	190.014	189.474	179.951	165.168	143.341
.94673E+09	176.590	176.140	175.677	167.569	154.882	136.128
.12623E+10	164.334	163.944	163.542	156.535	145.461	129.082
.15779E+10	153.995	153.654	153.303	147.206	137.503	123.125
.18935E+10	145.610	145.308	144.997	139.618	131.009	118.230
.22090E+10	138.621	138.351	138.074	133.280	125.574	114.114
.25246E+10	132.411	132.168	131.917	127.604	120.636	110.256
.28402E+10	127.573	127.351	127.122	123.187	116.807	107.288
.31558E+10	123.269	123.065	122.855	119.262	113.416	104.684
.63115E+10	102.566	102.446	102.323	100.228	96.7583	91.5517
.94673E+10	94.7010	94.6095	94.5154	92.9265	90.2792	86.2950
.12623E+11	90.1845	90.1093	90.0320	88.7299	86.5508	83.2648
.15779E+11	87.0512	86.9866	86.9202	85.8037	83.9300	81.1007
.18935E+11	84.2824	84.2261	84.1681	83.1954	81.5577	79.0812
.22090E+11	82.0229	81.9728	81.9213	81.0573	79.5991	77.3909
.25246E+11	80.0537	80.0089	79.9628	79.1911	77.8853	75.9055
.28402E+11	78.3767	78.3361	78.2943	77.5962	76.4128	74.6164
.31558E+11	76.9595	76.9224	76.8841	76.2463	75.1628	73.5164

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:10 JUN 20, 1995 CP= 64533.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
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.10000E-05	35.5294	34.0292	29.4547	26.1400	160.477	160.477
.20000E-05	77.3344	76.0231	71.8872	68.8425	190.830	190.836
31.558	77.3343	76.0230	71.8872	68.8425	190.829	190.836
.31558E+07	103.591	102.397	98.5608	95.6848	209.243	209.623
.63116E+07	107.908	106.735	102.959	100.117	212.221	212.610
.94673E+07	110.352	109.194	105.462	102.653	213.672	214.062
.12623E+08	112.066	110.920	107.223	104.441	214.578	214.969
.15779E+08	113.378	112.242	108.574	105.815	215.191	215.582
.18935E+08	114.422	113.294	109.653	106.915	215.608	215.999
.22090E+08	115.295	114.175	110.558	107.838	215.905	216.296
.25246E+08	116.039	114.926	111.331	108.629	216.110	216.501
.28402E+08	116.681	115.575	112.001	109.315	216.244	216.635
.31558E+08	117.246	116.146	112.592	109.921	216.325	216.715
.63115E+08	120.605	119.555	116.156	113.605	215.838	216.224
.94673E+08	122.140	121.128	117.849	115.389	214.358	214.740
.12623E+09	122.968	121.987	118.808	116.424	212.647	213.025
.15779E+09	123.473	122.518	119.422	117.102	211.003	211.377
.18935E+09	123.756	122.826	119.815	117.557	209.113	209.483
.22090E+09	123.943	123.036	120.096	117.893	207.425	207.791
.25246E+09	124.184	123.297	120.425	118.273	205.899	206.262
.28402E+09	123.699	122.829	120.014	117.906	203.886	204.242
.31558E+09	123.387	122.532	119.765	117.694	202.272	202.623
.63115E+09	120.186	119.471	117.162	115.436	186.650	186.959
.94673E+09	116.330	115.720	113.754	112.284	173.372	173.646
.12623E+10	111.824	111.292	109.583	108.307	161.633	161.877
.15779E+10	108.004	107.538	106.046	104.930	151.696	151.916
.18935E+10	104.810	104.397	103.075	102.087	143.610	143.811
.22090E+10	102.094	101.723	100.541	99.6582	136.865	137.050
.25246E+10	99.3751	99.0400	97.9713	97.1760	130.853	131.022
.28402E+10	97.3167	97.0097	96.0313	95.3055	126.168	126.326
.31558E+10	95.5429	95.2615	94.3653	93.7024	121.997	122.146
.63115E+10	86.1279	85.9610	85.4334	85.0458	101.866	101.963
.94673E+10	82.1445	82.0167	81.6142	81.3189	94.1803	94.2580
.12623E+11	79.8416	79.7362	79.4045	79.1617	89.7637	89.8298
.15779E+11	78.1522	78.0613	77.7760	77.5670	86.6934	86.7515
.18935E+11	76.4999	76.4203	76.1705	75.9880	83.9742	84.0249
.22090E+11	75.0883	75.0173	74.7950	74.6323	81.7517	81.7971
.25246E+11	73.8407	73.7770	73.5775	73.4320	79.8134	79.8544
.28402E+11	72.7422	72.6844	72.5038	72.3717	78.1607	78.1983
.31558E+11	71.7985	71.7456	71.5798	71.4590	76.7631	76.7982

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64534.050 TIME= 06:24:10
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3824 TEMP	ts2i180	75.71	.3156E+11	207.8	.3156E+08
3 NSOL	1021 TEMP	t02i180	75.71	.3156E+11	207.8	.3156E+08
4 NSOL	1031 TEMP	s02i180	75.72	.3156E+11	207.9	.3156E+08
5 NSOL	1122 TEMP	h02i180	76.63	.3156E+11	223.1	.3156E+08
6 NSOL	1136 TEMP	c02i180	77.11	.3156E+11	230.9	.3156E+08
7 NSOL	1150 TEMP	h02o180	77.25	.3156E+11	233.6	.3156E+08
8 NSOL	1079 TEMP	s02o180	77.05	.3156E+11	231.1	.3156E+08
9 NSOL	1071 TEMP	t02o180	77.05	.3156E+11	231.1	.3156E+08
10 NSOL	1901 TEMP	s10i180	77.05	.3156E+11	231.1	.3156E+08
11 NSOL	1992 TEMP	h10i180	77.42	.3156E+11	235.7	.3156E+08
12 NSOL	2006 TEMP	c10i180	77.46	.3156E+11	235.4	.3156E+08
13 NSOL	2020 TEMP	h10o180	77.22	.3156E+11	231.0	.3156E+08
14 NSOL	1949 TEMP	s10o180	76.65	.3156E+11	221.5	.3156E+08
15 NSOL	1941 TEMP	t10o180	76.65	.3156E+11	221.5	.3156E+08
16 NSOL	2626 TEMP	s16i180	76.65	.3156E+11	221.5	.3156E+08
17 NSOL	2717 TEMP	h16i180	76.69	.3156E+11	220.0	.3156E+08
18 NSOL	2731 TEMP	c16i180	76.41	.3156E+11	213.7	.3156E+08
19 NSOL	2745 TEMP	h16o180	75.85	.3156E+11	202.9	.6312E+08
20 NSOL	2674 TEMP	s16o180	74.98	.3156E+11	187.2	.6312E+08
21 NSOL	2666 TEMP	t16o180	74.98	.3156E+11	187.2	.6312E+08
22 NSOL	3061 TEMP	s22i180	74.98	.3156E+11	187.1	.6312E+08
23 NSOL	3152 TEMP	h22i180	74.90	.3156E+11	183.8	.6312E+08
24 NSOL	3166 TEMP	c22i180	74.52	.3156E+11	175.9	.6312E+08
25 NSOL	3180 TEMP	h22o180	73.86	.3156E+11	163.1	.9467E+08
26 NSOL	3109 TEMP	s22o180	66.48	.1000E-05	142.8	.1262E+09
27 NSOL	3101 TEMP	t22o180	66.37	.1000E-05	142.7	.1262E+09
28 NSOL	4254 TEMP	i22i180	29.31	.1000E-05	119.9	.2525E+09

29 NSOL 4157 TEMP i22o180 28.35 .1000E-05 119.0 .2525E+09
 30 NSOL 4385 TEMP o22o180 26.14 .1000E-05 117.3 .2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.529	176.540	176.643	194.052	203.085	206.136
31.558	176.530	176.541	176.643	194.052	203.085	206.136
.31558E+07	198.810	198.821	198.920	215.042	223.400	226.220
.63116E+07	202.396	202.407	202.505	218.407	226.660	229.445
.94673E+07	204.197	204.207	204.305	220.051	228.228	230.988
.12623E+08	205.347	205.358	205.455	221.079	229.196	231.935
.15779E+08	206.146	206.157	206.254	221.775	229.840	232.562
.18935E+08	206.711	206.722	206.818	222.248	230.268	232.975
.22090E+08	207.130	207.141	207.236	222.585	230.564	233.256
.25246E+08	207.440	207.450	207.545	222.819	230.759	233.438
.28402E+08	207.663	207.674	207.769	222.972	230.876	233.543
.31558E+08	207.823	207.833	207.928	223.064	230.935	233.590
.63115E+08	207.803	207.813	207.904	222.523	230.130	232.692
.94673E+08	206.551	206.560	206.649	220.872	228.276	230.766
.12623E+09	204.975	204.984	205.070	218.964	226.197	228.627
.15779E+09	203.425	203.435	203.518	217.133	224.222	226.600
.18935E+09	201.611	201.620	201.702	215.034	221.977	224.303
.22090E+09	199.986	199.995	200.075	213.163	219.979	222.259
.25246E+09	198.530	198.539	198.617	211.473	218.168	220.406
.28402E+09	196.512	196.520	196.597	209.257	215.850	218.050
.31558E+09	194.907	194.915	194.991	207.479	213.985	216.154
.63115E+09	179.554	179.561	179.624	190.397	196.030	197.896
.94673E+09	166.577	166.583	166.636	176.061	180.989	182.607
.12623E+10	155.138	155.143	155.189	163.548	167.915	169.334
.15779E+10	145.593	145.597	145.637	153.068	156.949	158.196
.18935E+10	137.900	137.904	137.939	144.598	148.083	149.197
.22090E+10	131.524	131.527	131.559	137.572	140.720	141.722
.25246E+10	125.830	125.833	125.861	131.342	134.210	135.120
.28402E+10	121.427	121.429	121.455	126.506	129.149	129.986
.31558E+10	117.538	117.540	117.564	122.218	124.654	125.422
.63115E+10	98.8906	98.8920	98.9058	101.742	103.227	103.687
.94673E+10	91.8227	91.8237	91.8342	94.0182	95.1631	95.5159
.12623E+11	87.7818	87.7827	87.7913	89.5988	90.5461	90.8366
.15779E+11	84.9673	84.9681	84.9754	86.5344	87.3513	87.6010
.18935E+11	82.4454	82.4460	82.4525	83.8198	84.5360	84.7543
.22090E+11	80.3747	80.3753	80.3810	81.6022	82.2419	82.4362
.25246E+11	78.5680	78.5685	78.5736	79.6700	80.2441	80.4182
.28402E+11	77.0219	77.0224	77.0270	78.0231	78.5446	78.7023
.31558E+11	75.7126	75.7131	75.7173	76.6310	77.1093	77.2537

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP	1071 TEMP	1901 TEMP	1992 TEMP	2006 TEMP	2020 TEMP
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	s02o180	t02o180	s10i180	h10i180	c10i180	h10o180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.239	203.237	203.252	208.860	208.928	204.158
31.558	203.240	203.237	203.253	208.860	208.927	204.158
.31558E+07	223.555	223.552	223.566	228.511	228.353	223.718
.63116E+07	226.814	226.812	226.825	231.674	231.487	226.875
.94673E+07	228.381	228.378	228.392	233.178	232.975	228.388
.12623E+08	229.347	229.344	229.358	234.097	233.884	229.318
.15779E+08	229.989	229.987	230.000	234.701	234.481	229.936
.18935E+08	230.416	230.413	230.426	235.095	234.870	230.344
.22090E+08	230.709	230.706	230.719	235.361	235.132	230.624
.25246E+08	230.902	230.899	230.912	235.529	235.298	230.806
.28402E+08	231.017	231.014	231.027	235.621	235.388	230.913
.31558E+08	231.074	231.071	231.084	235.656	235.422	230.964
.63115E+08	230.248	230.246	230.258	234.678	234.446	230.125
.94673E+08	228.377	228.374	228.386	232.700	232.479	228.274
.12623E+09	226.282	226.280	226.291	230.522	230.315	226.210
.15779E+09	224.293	224.291	224.302	228.463	228.269	224.251
.18935E+09	222.034	222.031	222.043	226.136	225.956	222.026
.22090E+09	220.023	220.020	220.031	224.065	223.898	220.045
.25246E+09	218.200	218.198	218.209	222.185	222.029	218.249
.28402E+09	215.869	215.867	215.878	219.811	219.670	215.956
.31558E+09	213.996	213.994	214.004	217.900	217.770	214.112
.63115E+09	195.976	195.974	195.983	199.471	199.433	196.314
.94673E+09	180.885	180.884	180.892	184.033	184.058	181.364
.12623E+10	167.762	167.761	167.768	170.635	170.707	168.346
.15779E+10	156.761	156.760	156.766	159.375	159.474	157.395
.18935E+10	147.888	147.887	147.893	150.272	150.385	148.532
.22090E+10	140.527	140.527	140.531	142.707	142.825	141.162
.25246E+10	134.020	134.020	134.024	136.029	136.152	134.644
.28402E+10	128.964	128.963	128.967	130.832	130.955	129.572
.31558E+10	124.474	124.473	124.477	126.208	126.330	125.061
.63115E+10	103.086	103.085	103.087	104.185	104.284	103.523
.94673E+10	95.0453	95.0450	95.0468	95.9031	95.9857	95.4012
.12623E+11	90.4431	90.4429	90.4443	91.1586	91.2299	90.7471
.15779E+11	87.2597	87.2595	87.2608	87.8795	87.9425	87.5267
.18935E+11	84.4531	84.4529	84.4540	84.9994	85.0560	84.6920
.22090E+11	82.1657	82.1655	82.1665	82.6556	82.7074	82.3826
.25246E+11	80.1742	80.1741	80.1749	80.6156	80.6629	80.3717
.28402E+11	78.4797	78.4796	78.4804	78.8820	78.9257	78.6614
.31558E+11	77.0489	77.0488	77.0495	77.4188	77.4593	77.2171

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.810
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1949 TEMP s10o180	1941 TEMP t10o180	2626 TEMP s16i180	2717 TEMP h16i180	2731 TEMP c16i180	2745 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.633	193.596	193.577	192.674	186.104	174.369
31.558	193.633	193.596	193.577	192.674	186.104	174.369
.31558E+07	213.772	213.734	213.714	212.397	205.844	194.500
.63116E+07	217.027	216.990	216.970	215.601	209.067	197.805
.94673E+07	218.615	218.578	218.558	217.164	210.656	199.468
.12623E+08	219.608	219.571	219.551	218.143	211.659	200.534
.15779E+08	220.279	220.242	220.222	218.805	212.345	201.277
.18935E+08	220.735	220.699	220.679	219.257	212.821	201.805
.22090E+08	221.059	221.023	221.003	219.578	213.167	202.200
.25246E+08	221.284	221.247	221.227	219.802	213.414	202.494
.28402E+08	221.430	221.394	221.374	219.949	213.584	202.709
.31558E+08	221.518	221.482	221.462	220.039	213.696	202.864

.63115E+08	220.983	220.948	220.929	219.542	213.399	202.925
.94673E+08	219.373	219.339	219.320	217.983	212.013	201.832
.12623E+09	217.513	217.480	217.462	216.175	210.359	200.430
.15779E+09	215.728	215.696	215.678	214.437	208.754	199.041
.18935E+09	213.681	213.649	213.632	212.441	206.895	197.404
.22090E+09	211.854	211.823	211.807	210.658	205.231	195.934
.25246E+09	210.203	210.173	210.157	209.047	203.731	194.618
.28402E+09	208.038	208.008	207.993	206.927	201.715	192.769
.31558E+09	206.303	206.274	206.259	205.228	200.104	191.300
.63115E+09	189.590	189.566	189.554	188.831	184.556	177.112
.94673E+09	175.492	175.472	175.462	174.972	171.353	164.956
.12623E+10	163.143	163.126	163.118	162.804	159.690	154.105
.15779E+10	152.770	152.756	152.749	152.552	149.848	144.945
.18935E+10	144.389	144.376	144.370	144.246	141.865	137.513
.22090E+10	137.424	137.413	137.408	137.336	135.219	131.319
.25246E+10	131.240	131.230	131.226	131.194	129.292	125.764
.28402E+10	126.436	126.427	126.423	126.418	124.686	121.452
.31558E+10	122.172	122.164	122.160	122.176	120.595	117.630
.63115E+10	101.763	101.759	101.757	101.826	100.909	99.1433
.94673E+10	94.0440	94.0404	94.0389	94.1063	93.4110	92.0607
.12623E+11	89.6225	89.6196	89.6184	89.6819	89.1120	87.9989
.15779E+11	86.5563	86.5538	86.5528	86.6114	86.1227	85.1650
.18935E+11	83.8405	83.8383	83.8374	83.8927	83.4669	82.6292
.22090E+11	81.6218	81.6198	81.6191	81.6714	81.2932	80.5466
.25246E+11	79.6884	79.6867	79.6860	79.7353	79.3974	78.7284
.28402E+11	78.0404	78.0389	78.0382	78.0848	77.7792	77.1725
.31558E+11	76.6473	76.6459	76.6453	76.6894	76.4100	75.8543

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0555
.20000E-05	156.266	156.206	156.169	153.018	144.150	129.327
31.558	156.267	156.206	156.169	153.017	144.150	129.327
.31558E+07	177.358	177.296	177.258	173.826	165.215	151.060
.63116E+07	180.832	180.771	180.733	177.271	168.715	154.700
.94673E+07	182.626	182.565	182.527	179.057	170.550	156.646
.12623E+08	183.801	183.741	183.703	180.232	171.770	157.958
.15779E+08	184.640	184.579	184.541	181.074	172.654	158.922
.18935E+08	185.255	185.195	185.157	181.696	173.315	159.657
.22090E+08	185.730	185.670	185.633	182.179	173.835	160.247
.25246E+08	186.100	186.041	186.003	182.559	174.250	160.727
.28402E+08	186.388	186.328	186.291	182.856	174.582	161.121
.31558E+08	186.613	186.554	186.516	183.091	174.851	161.450
.63115E+08	187.239	187.182	187.145	183.824	175.870	162.956
.94673E+08	186.599	186.544	186.509	183.289	175.573	163.052
.12623E+09	185.585	185.531	185.497	182.372	174.862	162.678
.15779E+09	184.527	184.475	184.442	181.400	174.068	162.171
.18935E+09	183.228	183.177	183.144	180.191	173.041	161.435
.22090E+09	182.050	182.000	181.968	179.091	172.099	160.746
.25246E+09	181.008	180.959	180.929	178.122	171.278	160.162
.28402E+09	179.402	179.354	179.324	176.590	169.882	158.977
.31558E+09	178.139	178.092	178.063	175.388	168.794	158.068
.63115E+09	165.929	165.891	165.867	163.739	158.225	149.194
.94673E+09	155.293	155.260	155.241	153.512	148.809	141.077
.12623E+10	145.625	145.597	145.581	144.144	140.070	133.342
.15779E+10	137.487	137.463	137.449	136.241	132.691	126.805
.18935E+10	130.872	130.852	130.839	129.806	126.671	121.454
.22090E+10	125.354	125.336	125.325	124.429	121.633	116.966

.25246E+10	120.354	120.338	120.328	119.544	117.025	112.809
.28402E+10	116.486	116.471	116.462	115.763	113.464	109.604
.31558E+10	113.069	113.055	113.048	112.422	110.321	106.785
.63115E+10	96.4079	96.4001	96.3956	96.0667	94.8349	92.7439
.94673E+10	89.9630	89.9571	89.9537	89.7149	88.7790	87.1839
.12623E+11	86.2666	86.2618	86.2590	86.0686	85.2999	83.9865
.15779E+11	83.6728	83.6687	83.6664	83.5055	82.8452	81.7157
.18935E+11	81.3223	81.3187	81.3167	81.1793	80.6031	79.6157
.22090E+11	79.3806	79.3775	79.3757	79.2558	78.7434	77.8639
.25246E+11	77.6826	77.6798	77.6782	77.5727	77.1144	76.3267
.28402E+11	76.2231	76.2206	76.2191	76.1251	75.7101	74.9959
.31558E+11	74.9839	74.9816	74.9803	74.8953	74.5156	73.8615

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:14 JUN 20, 1995 CP= 64537.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4811	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.772	104.657	72.1083	71.0550	68.8241
31.558	104.772	104.657	72.1082	71.0550	68.8241
.31558E+07	127.772	127.655	97.9127	96.8153	94.5389
.63116E+07	131.655	131.538	102.326	101.227	98.9546
.94673E+07	133.797	133.681	104.842	103.746	101.490
.12623E+08	135.274	135.158	106.614	105.522	103.281
.15779E+08	136.382	136.266	107.972	106.884	104.656
.18935E+08	137.248	137.133	109.059	107.975	105.760
.22090E+08	137.958	137.844	109.969	108.889	106.685
.25246E+08	138.553	138.439	110.748	109.671	107.479
.28402E+08	139.055	138.942	111.422	110.349	108.168
.31558E+08	139.489	139.375	112.017	110.949	108.778
.63115E+08	141.835	141.725	115.606	114.574	112.488
.94673E+08	142.603	142.497	117.311	116.310	114.295
.12623E+09	142.800	142.697	118.279	117.306	115.350
.15779E+09	142.777	142.676	118.900	117.952	116.047
.18935E+09	142.533	142.435	119.298	118.375	116.521
.22090E+09	142.268	142.172	119.583	118.683	116.873
.25246E+09	142.083	141.989	119.916	119.036	117.267
.28402E+09	141.250	141.158	119.515	118.655	116.924
.31558E+09	140.640	140.550	119.275	118.431	116.731
.63115E+09	134.598	134.524	116.716	116.024	114.617
.94673E+09	128.623	128.560	113.339	112.760	111.572
.12623E+10	122.521	122.468	109.204	108.712	107.689
.15779E+10	117.351	117.306	105.692	105.269	104.382
.18935E+10	113.083	113.043	102.743	102.374	101.593
.22090E+10	109.484	109.448	100.227	99.9016	99.2076
.25246E+10	106.050	106.019	97.6775	97.3871	96.7661
.28402E+10	103.420	103.392	95.7525	95.4894	94.9254
.31558E+10	101.124	101.098	94.0988	93.8601	93.3468
.63115E+10	89.4095	89.3948	85.2497	85.1160	84.8223
.94673E+10	84.6420	84.6309	81.4622	81.3625	81.1409
.12623E+11	81.8943	81.8853	79.2734	79.1922	79.0110
.15779E+11	79.9168	79.9091	77.6596	77.5905	77.4350
.18935E+11	78.0433	78.0366	76.0683	76.0082	75.8731
.22090E+11	76.4634	76.4575	74.7025	74.6495	74.5296
.25246E+11	75.0722	75.0669	73.4936	73.4463	73.3394
.28402E+11	73.8586	73.8538	72.4262	72.3837	72.2868
.31558E+11	72.8198	72.8155	71.5071	71.4682	71.3798

Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64537.980 TIME= 06:24:14
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180
 VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180
 VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180
 VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180
 VARIABLE 7 IS AT NODE 71 ITEM= TEMP COMP= NAME= h02o180
 VARIABLE 8 IS AT NODE 22 ITEM= TEMP COMP= NAME= s02o180
 VARIABLE 9 IS AT NODE 120 ITEM= TEMP COMP= NAME= t02o180
 VARIABLE 10 IS AT NODE 161 ITEM= TEMP COMP= NAME= s10i180
 VARIABLE 11 IS AT NODE 252 ITEM= TEMP COMP= NAME= h10i180
 VARIABLE 12 IS AT NODE 266 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 280 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 209 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 201 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 306 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 397 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 411 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 425 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 354 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 346 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 451 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 542 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 556 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 570 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 499 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 491 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 3991 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3981 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4617 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	NSOL	3802	TEMP	ts2i180	75.69	.3156E+11	207.5	.3156E+08
3	NSOL	87	TEMP	t02i180	75.69	.3156E+11	207.5	.3156E+08
4	NSOL	6	TEMP	s02i180	75.69	.3156E+11	207.6	.3156E+08

5	NSOL	43	TEMP	h02i180	76.61	.3156E+11	222.8	.3156E+08
6	NSOL	57	TEMP	c02i180	77.08	.3156E+11	230.7	.3156E+08
7	NSOL	71	TEMP	h02o180	77.23	.3156E+11	233.3	.3156E+08
8	NSOL	22	TEMP	s02o180	77.02	.3156E+11	230.8	.3156E+08
9	NSOL	120	TEMP	t02o180	77.02	.3156E+11	230.8	.3156E+08
10	NSOL	161	TEMP	s10i180	77.02	.3156E+11	230.8	.3156E+08
11	NSOL	252	TEMP	h10i180	77.39	.3156E+11	235.4	.3156E+08
12	NSOL	266	TEMP	c10i180	77.43	.3156E+11	235.2	.3156E+08
13	NSOL	280	TEMP	h10o180	77.19	.3156E+11	230.7	.3156E+08
14	NSOL	209	TEMP	s10o180	76.62	.3156E+11	221.3	.3156E+08
15	NSOL	201	TEMP	t10o180	76.62	.3156E+11	221.2	.3156E+08
16	NSOL	306	TEMP	s16i180	76.62	.3156E+11	221.2	.3156E+08
17	NSOL	397	TEMP	h16i180	76.66	.3156E+11	219.8	.3156E+08
18	NSOL	411	TEMP	c16i180	76.39	.3156E+11	213.4	.3156E+08
19	NSOL	425	TEMP	h16o180	75.83	.3156E+11	202.7	.6312E+08
20	NSOL	354	TEMP	s16o180	74.96	.3156E+11	187.0	.6312E+08
21	NSOL	346	TEMP	t16o180	74.96	.3156E+11	186.9	.6312E+08
22	NSOL	451	TEMP	s22i180	74.95	.3156E+11	186.9	.6312E+08
23	NSOL	542	TEMP	h22i180	74.87	.3156E+11	183.5	.6312E+08
24	NSOL	556	TEMP	c22i180	74.49	.3156E+11	175.6	.6312E+08
25	NSOL	570	TEMP	h22o180	73.84	.3156E+11	162.8	.9467E+08
26	NSOL	499	TEMP	s22o180	66.48	.1000E-05	142.5	.1262E+09
27	NSOL	491	TEMP	t22o180	66.37	.1000E-05	142.4	.1262E+09
28	NSOL	3991	TEMP	i22i180	29.31	.1000E-05	119.6	.2525E+09
29	NSOL	3981	TEMP	i22o180	28.35	.1000E-05	118.8	.2525E+09
30	NSOL	4617	TEMP	o22o180	26.14	.1000E-05	117.0	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.700
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.521	176.532	176.634	194.045	203.078	206.129
31.558	176.521	176.532	176.635	194.045	203.077	206.129
.31558E+07	198.486	198.497	198.596	214.746	223.119	225.950
.63116E+07	202.067	202.078	202.176	218.105	226.374	229.169
.94673E+07	203.868	203.878	203.976	219.749	227.942	230.711
.12623E+08	205.019	205.030	205.127	220.777	228.909	231.659
.15779E+08	205.818	205.829	205.926	221.473	229.554	232.285
.18935E+08	206.384	206.395	206.491	221.947	229.982	232.699
.22090E+08	206.803	206.814	206.910	222.284	230.278	232.980
.25246E+08	207.114	207.124	207.219	222.518	230.474	233.163
.28402E+08	207.338	207.349	207.443	222.672	230.592	233.268
.31558E+08	207.498	207.509	207.603	222.765	230.651	233.316
.63115E+08	207.485	207.495	207.586	222.229	229.850	232.421
.94673E+08	206.238	206.248	206.336	220.583	228.000	230.499
.12623E+09	204.667	204.677	204.763	218.679	225.926	228.363
.15779E+09	203.122	203.131	203.215	216.852	223.954	226.340
.18935E+09	201.312	201.321	201.403	214.757	221.713	224.046
.22090E+09	199.691	199.700	199.780	212.889	219.717	222.005
.25246E+09	198.239	198.248	198.326	211.202	217.909	220.154
.28402E+09	196.227	196.236	196.312	208.991	215.596	217.803
.31558E+09	194.628	194.636	194.711	207.218	213.735	215.911
.63115E+09	179.312	179.319	179.382	190.169	195.811	197.682
.94673E+09	166.364	166.370	166.424	175.859	180.794	182.417
.12623E+10	154.952	154.957	155.003	163.371	167.744	169.166
.15779E+10	145.427	145.431	145.471	152.908	156.794	158.044
.18935E+10	137.749	137.753	137.788	144.454	147.942	149.058
.22090E+10	131.385	131.389	131.420	137.439	140.590	141.594
.25246E+10	125.703	125.706	125.734	131.219	134.091	135.003

.28402E+10	121.308	121.311	121.337	126.392	129.038	129.876
.31558E+10	117.427	117.429	117.453	122.111	124.550	125.319
.63115E+10	98.8198	98.8212	98.8350	101.673	103.159	103.620
.94673E+10	91.7659	91.7670	91.7775	93.9628	95.1086	95.4619
.12623E+11	87.7336	87.7344	87.7430	89.5517	90.4997	90.7906
.15779E+11	84.9250	84.9257	84.9331	86.4930	87.3105	87.5605
.18935E+11	82.4084	82.4090	82.4155	83.7835	84.5003	84.7189
.22090E+11	80.3415	80.3421	80.3478	81.5698	82.2099	82.4045
.25246E+11	78.5380	78.5385	78.5436	79.6407	80.2152	80.3895
.28402E+11	76.9944	76.9949	76.9995	77.9962	78.5180	78.6759
.31558E+11	75.6869	75.6874	75.6916	76.6058	77.0845	77.2290

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.710
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP s02o180	120 TEMP t02o180	161 TEMP s101i180	252 TEMP h101i180	266 TEMP c101i180	280 TEMP h101i180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.233	203.231	203.246	208.854	208.921	204.152
.31558E+07	203.233	203.231	203.246	208.854	208.921	204.151
.63116E+07	223.290	223.288	223.302	228.255	228.102	223.468
.94673E+07	226.544	226.542	226.555	231.412	231.229	226.620
.12623E+08	228.110	228.107	228.121	232.915	232.717	228.131
.15779E+08	229.076	229.074	229.087	233.834	233.625	229.062
.18935E+08	229.718	229.716	229.729	234.438	234.222	229.679
.22090E+08	230.145	230.143	230.156	234.832	234.612	230.088
.25246E+08	230.439	230.436	230.449	235.098	234.874	230.367
.28402E+08	230.632	230.630	230.643	235.266	235.040	230.550
.31558E+08	230.747	230.745	230.758	235.358	235.130	230.657
.63115E+08	230.805	230.802	230.815	235.394	235.165	230.708
.94673E+08	229.983	229.981	229.993	234.420	234.192	229.873
.12623E+09	228.115	228.112	228.124	232.445	232.228	228.025
.15779E+09	226.024	226.021	226.033	230.270	230.067	225.963
.18935E+09	224.037	224.035	224.046	228.214	228.024	224.007
.22090E+09	221.781	221.779	221.790	225.889	225.713	221.785
.25246E+09	219.773	219.770	219.781	223.821	223.658	219.806
.28402E+09	217.953	217.950	217.961	221.943	221.790	218.011
.31558E+09	215.626	215.624	215.635	219.574	219.436	215.723
.63115E+09	213.757	213.754	213.765	217.666	217.540	213.883
.94673E+09	195.765	195.763	195.772	199.264	199.229	196.111
.12623E+10	180.697	180.696	180.703	183.848	183.875	181.182
.15779E+10	167.595	167.594	167.601	170.471	170.544	168.184
.18935E+10	156.611	156.610	156.616	159.227	159.327	157.249
.22090E+10	147.751	147.750	147.756	150.137	150.250	148.397
.25246E+10	140.401	140.400	140.405	142.582	142.701	141.038
.28402E+10	133.904	133.903	133.908	135.914	136.037	134.530
.31558E+10	128.855	128.854	128.858	130.724	130.848	129.465
.63115E+10	124.371	124.370	124.374	126.107	126.229	124.960
.94673E+10	103.019	103.018	103.021	104.118	104.218	103.457
.12623E+11	94.9916	94.9912	94.9930	95.8496	95.9324	95.3480
.15779E+11	90.3973	90.3970	90.3985	91.1130	91.1844	90.7017
.18935E+11	87.2194	87.2192	87.2205	87.8394	87.9025	87.4867
.22090E+11	84.4179	84.4177	84.4188	84.9643	85.0210	84.6570
.25246E+11	82.1341	82.1339	82.1349	82.6242	82.6760	82.3513
.28402E+11	80.1456	80.1455	80.1463	80.5871	80.6345	80.3434
.31558E+11	78.4535	78.4533	78.4541	78.8558	78.8996	78.6353
	77.0243	77.0242	77.0249	77.3943	77.4349	77.1928

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.720

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.626	193.589	193.571	192.668	186.098	174.363
31.558	193.627	193.590	193.571	192.668	186.097	174.363
.31558E+07	213.521	213.484	213.464	212.147	205.591	194.239
.63116E+07	216.771	216.733	216.713	215.345	208.807	197.538
.94673E+07	218.358	218.321	218.301	216.908	210.396	199.199
.12623E+08	219.350	219.313	219.293	217.886	211.398	200.265
.15779E+08	220.021	219.984	219.964	218.548	212.084	201.008
.18935E+08	220.478	220.441	220.421	219.000	212.561	201.537
.22090E+08	220.802	220.765	220.745	219.321	212.906	201.931
.25246E+08	221.027	220.990	220.970	219.546	213.154	202.225
.28402E+08	221.173	221.137	221.117	219.693	213.324	202.440
.31558E+08	221.262	221.226	221.206	219.783	213.437	202.596
.63115E+08	220.730	220.695	220.676	219.289	213.143	202.660
.94673E+08	219.122	219.088	219.070	217.732	211.759	201.570
.12623E+09	217.265	217.232	217.214	215.927	210.108	200.170
.15779E+09	215.483	215.450	215.433	214.192	208.505	198.785
.18935E+09	213.438	213.407	213.390	212.198	206.648	197.150
.22090E+09	211.613	211.583	211.566	210.417	204.987	195.683
.25246E+09	209.964	209.934	209.918	208.808	203.489	194.369
.28402E+09	207.804	207.775	207.759	206.693	201.477	192.525
.31558E+09	206.073	206.044	206.028	204.997	199.870	191.059
.63115E+09	189.386	189.362	189.350	188.626	184.349	176.900
.94673E+09	175.308	175.288	175.278	174.789	171.167	164.766
.12623E+10	162.980	162.963	162.955	162.641	159.525	153.936
.15779E+10	152.623	152.608	152.602	152.405	149.699	144.792
.18935E+10	144.254	144.241	144.235	144.111	141.729	137.373
.22090E+10	137.300	137.288	137.283	137.211	135.092	131.190
.25246E+10	131.126	131.116	131.111	131.079	129.176	125.645
.28402E+10	126.329	126.320	126.316	126.310	124.577	121.341
.31558E+10	122.071	122.063	122.059	122.074	120.493	117.526
.63115E+10	101.697	101.693	101.691	101.759	100.842	99.0751
.94673E+10	93.9907	93.9871	93.9856	94.0527	93.3568	92.0057
.12623E+11	89.5771	89.5741	89.5729	89.6362	89.0657	87.9520
.15779E+11	86.5164	86.5138	86.5128	86.5712	86.0821	85.1238
.18935E+11	83.8055	83.8033	83.8025	83.8575	83.4314	82.5931
.22090E+11	81.5904	81.5885	81.5877	81.6398	81.2613	80.5143
.25246E+11	79.6600	79.6583	79.6576	79.7067	79.3685	78.6992
.28402E+11	78.0144	78.0128	78.0122	78.0585	77.7527	77.1456
.31558E+11	76.6229	76.6215	76.6210	76.6649	76.3852	75.8291

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.740
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0556
.20000E-05	156.260	156.199	156.162	153.011	144.143	129.320
31.558	156.260	156.199	156.162	153.011	144.143	129.320
.31558E+07	177.083	177.022	176.983	173.554	164.942	150.785

.63116E+07	180.551	180.490	180.451	176.992	168.436	154.419
.94673E+07	182.344	182.283	182.245	178.777	170.271	156.364
.12623E+08	183.519	183.459	183.420	179.952	171.490	157.676
.15779E+08	184.357	184.297	184.259	180.794	172.374	158.640
.18935E+08	184.973	184.913	184.875	181.417	173.035	159.376
.22090E+08	185.448	185.388	185.350	181.899	173.555	159.966
.25246E+08	185.818	185.759	185.721	182.279	173.971	160.447
.28402E+08	186.106	186.046	186.009	182.576	174.303	160.841
.31558E+08	186.331	186.272	186.235	182.812	174.572	161.170
.63115E+08	186.961	186.904	186.867	183.549	175.595	162.681
.94673E+08	186.324	186.269	186.234	183.017	175.301	162.781
.12623E+09	185.313	185.260	185.226	182.103	174.594	162.411
.15779E+09	184.259	184.206	184.173	181.134	173.803	161.907
.18935E+09	182.962	182.911	182.879	179.928	172.779	161.174
.22090E+09	181.787	181.737	181.706	178.831	171.840	160.488
.25246E+09	180.748	180.699	180.668	177.864	171.021	159.907
.28402E+09	179.147	179.099	179.069	176.337	169.630	158.727
.31558E+09	177.888	177.841	177.811	175.139	168.547	157.822
.63115E+09	165.708	165.669	165.645	163.520	158.008	148.979
.94673E+09	155.095	155.063	155.043	153.317	148.616	140.886
.12623E+10	145.450	145.423	145.406	143.971	139.899	133.174
.15779E+10	137.329	137.306	137.291	136.085	132.538	126.655
.18935E+10	130.729	130.708	130.696	129.664	126.531	121.317
.22090E+10	125.221	125.203	125.192	124.298	121.504	116.840
.25246E+10	120.232	120.216	120.206	119.424	116.907	112.693
.28402E+10	116.372	116.357	116.348	115.651	113.353	109.496
.31558E+10	112.962	112.948	112.940	112.316	110.217	106.684
.63115E+10	96.3383	96.3305	96.3260	95.9980	94.7677	92.6788
.94673E+10	89.9070	89.9011	89.8977	89.6597	88.7250	87.1317
.12623E+11	86.2189	86.2141	86.2113	86.0215	85.2539	83.9421
.15779E+11	83.6309	83.6268	83.6245	83.4642	82.8049	81.6767
.18935E+11	81.2857	81.2821	81.2801	81.1432	80.5679	79.5817
.22090E+11	79.3478	79.3446	79.3429	79.2234	78.7119	77.8335
.25246E+11	77.6529	77.6501	77.6485	77.5434	77.0859	76.2991
.28402E+11	76.1959	76.1933	76.1919	76.0982	75.6839	74.9706
.31558E+11	74.9585	74.9561	74.9548	74.8702	74.4911	73.8379

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:18 JUN 20, 1995 CP= 64541.750
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP	491 TEMP	3991 TEMP	3981 TEMP	4617 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4812	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.765	104.650	72.1003	71.0470	68.8177
31.558	104.765	104.650	72.1002	71.0470	68.8177
.31558E+07	127.490	127.374	97.5976	96.5002	94.2865
.63116E+07	131.368	131.252	102.007	100.908	98.6986
.94673E+07	133.510	133.394	104.523	103.428	101.234
.12623E+08	134.987	134.871	106.296	105.204	103.025
.15779E+08	136.095	135.980	107.655	106.567	104.401
.18935E+08	136.962	136.847	108.743	107.658	105.505
.22090E+08	137.673	137.558	109.653	108.573	106.431
.25246E+08	138.268	138.154	110.433	109.357	107.226
.28402E+08	138.771	138.657	111.108	110.036	107.916
.31558E+08	139.205	139.091	111.704	110.636	108.526
.63115E+08	141.556	141.447	115.301	114.268	112.243
.94673E+08	142.329	142.223	117.012	116.011	114.055
.12623E+09	142.530	142.427	117.986	117.013	115.115
.15779E+09	142.511	142.411	118.612	117.664	115.815
.18935E+09	142.271	142.173	119.014	118.092	116.293
.22090E+09	142.009	141.914	119.304	118.404	116.649
.25246E+09	141.827	141.733	119.641	118.761	117.046

.28402E+09	141.000	140.908	119.247	118.387	116.708
.31558E+09	140.394	140.304	119.011	118.167	116.520
.63115E+09	134.385	134.311	116.491	115.799	114.436
.94673E+09	128.435	128.373	113.143	112.564	111.415
.12623E+10	122.357	122.304	109.034	108.541	107.552
.15779E+10	117.204	117.158	105.540	105.117	104.260
.18935E+10	112.950	112.910	102.606	102.237	101.483
.22090E+10	109.361	109.326	100.102	99.7766	99.1075
.25246E+10	105.938	105.907	97.5636	97.2732	96.6749
.28402E+10	103.316	103.287	95.6467	95.3837	94.8406
.31558E+10	101.026	101.000	93.9998	93.7611	93.2674
.63115E+10	89.3468	89.3321	85.1870	85.0534	84.7722
.94673E+10	84.5918	84.5808	81.4122	81.3126	81.1008
.12623E+11	81.8517	81.8427	79.2310	79.1498	78.9770
.15779E+11	79.8794	79.8717	77.6225	77.5533	77.4053
.18935E+11	78.0107	78.0040	76.0359	75.9758	75.8472
.22090E+11	76.4342	76.4283	74.6735	74.6205	74.5063
.25246E+11	75.0458	75.0405	73.4674	73.4201	73.3184
.28402E+11	73.8343	73.8295	72.4021	72.3596	72.2676
.31558E+11	72.7971	72.7928	71.4846	71.4457	71.3618

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 64541.900 TIME= 06:24:18
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135

VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135

VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135

VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135

VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135

VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135

VARIABLE 10 IS AT NODE 1507 ITEM= TEMP COMP= NAME= s12i135

VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135

VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135

VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135

VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135

VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135

VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135

VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135

VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135

VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135

VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135

VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135

VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= t20o135

VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135

VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM AT TIME
2	NSOL	3526 TEMP	ts2i135	75.71	.3156E+11	208.0 .3156E+08
3	NSOL	82 TEMP	t02i135	75.71	.3156E+11	208.0 .3156E+08
4	NSOL	1 TEMP	s02i135	75.71	.3156E+11	208.0 .3156E+08
5	NSOL	41 TEMP	h02i135	76.33	.3156E+11	218.2 .3156E+08
6	NSOL	57 TEMP	c02i135	77.08	.3156E+11	230.7 .3156E+08
7	NSOL	73 TEMP	h02o135	77.49	.3156E+11	237.9 .3156E+08
8	NSOL	10 TEMP	s02o135	77.65	.3156E+11	240.9 .3156E+08
9	NSOL	116 TEMP	t02o135	77.67	.3156E+11	241.2 .3156E+08
10	NSOL	1607 TEMP	s12i135	77.68	.3156E+11	241.5 .3156E+08
11	NSOL	1700 TEMP	h12i135	78.20	.3156E+11	248.0 .2840E+08
12	NSOL	1716 TEMP	c12i135	78.31	.3156E+11	247.8 .2840E+08
13	NSOL	1732 TEMP	h12o135	77.79	.3156E+11	238.1 .3156E+08
14	NSOL	1655 TEMP	s12o135	76.86	.3156E+11	221.2 .3156E+08
15	NSOL	1647 TEMP	t12o135	76.83	.3156E+11	220.5 .3156E+08
16	NSOL	2477 TEMP	s20i135	76.79	.3156E+11	219.7 .3156E+08
17	NSOL	2570 TEMP	h20i135	76.14	.3156E+11	205.5 .3156E+08
18	NSOL	2586 TEMP	c20i135	75.05	.3156E+11	184.3 .6312E+08
19	NSOL	2602 TEMP	h20o135	73.39	.3156E+11	153.3 .9467E+08
20	NSOL	2525 TEMP	s20o135	35.53	.1000E-05	122.6 .2525E+09
21	NSOL	2517 TEMP	t20o135	34.03	.1000E-05	121.7 .2525E+09
22	NSOL	3956 TEMP	i20o135	29.45	.1000E-05	118.8 .2525E+09
23	NSOL	4591 TEMP	o20o135	26.14	.1000E-05	116.6 .2525E+09
24	NSOL	2441 TEMP	c14i135	76.69	.3156E+11	215.6 .3156E+08
25	NSOL	1861 TEMP	c18i135	76.67	.3156E+11	215.4 .3156E+08
26	NSOL	499 TEMP	s22o180	66.48	.1000E-05	142.5 .1262E+09
27	NSOL	491 TEMP	t22o180	66.37	.1000E-05	142.4 .1262E+09
28	NSOL	3991 TEMP	i22i180	29.31	.1000E-05	119.6 .2525E+09
29	NSOL	3981 TEMP	i22o180	28.35	.1000E-05	118.8 .2525E+09
30	NSOL	4617 TEMP	o22o180	26.14	.1000E-05	117.0 .2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64544.980
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts2i135	82 TEMP t02i135	1 TEMP s02i135	41 TEMP h02i135	57 TEMP c02i135	73 TEMP h02o135
.10000E-05	139.403	139.403	139.409	152.795	168.730	177.938
.20000E-05	176.866	176.866	176.872	188.754	203.078	211.438
31.558	176.866	176.866	176.872	188.754	203.077	211.437
.31558E+07	198.961	198.952	198.954	209.903	223.119	230.823
.63116E+07	202.543	202.534	202.537	213.329	226.374	233.979
.94673E+07	204.342	204.333	204.336	215.021	227.942	235.477
.12623E+08	205.492	205.483	205.486	216.086	228.909	236.388
.15779E+08	206.290	206.281	206.283	216.813	229.554	236.985
.18935E+08	206.854	206.845	206.847	217.314	229.982	237.371
.22090E+08	207.272	207.262	207.265	217.676	230.278	237.628
.25246E+08	207.580	207.571	207.574	217.933	230.474	237.788
.28402E+08	207.803	207.794	207.796	218.107	230.592	237.872
.31558E+08	207.962	207.953	207.955	218.220	230.651	237.899

.63115E+08	207.934	207.925	207.928	217.840	229.850	236.846
.94673E+08	206.675	206.666	206.668	216.312	228.000	234.801
.12623E+09	205.094	205.085	205.087	214.507	225.926	232.563
.15779E+09	203.539	203.531	203.533	212.764	223.954	230.452
.18935E+09	201.720	201.711	201.713	210.754	221.713	228.070
.22090E+09	200.090	200.082	200.084	208.959	219.717	225.953
.25246E+09	198.631	198.622	198.624	207.342	217.909	224.030
.28402E+09	196.610	196.602	196.604	205.189	215.596	221.617
.31558E+09	195.004	194.996	194.997	203.466	213.735	219.673
.63115E+09	179.627	179.620	179.622	186.927	195.811	200.930
.94673E+09	166.633	166.627	166.628	173.022	180.794	185.250
.12623E+10	155.183	155.178	155.179	160.855	167.744	171.665
.15779E+10	145.629	145.624	145.625	150.672	156.794	160.253
.18935E+10	137.929	137.924	137.925	142.449	147.942	151.035
.22090E+10	131.546	131.543	131.543	135.629	140.590	143.377
.25246E+10	125.848	125.845	125.845	129.569	134.091	136.625
.28402E+10	121.442	121.439	121.439	124.871	129.038	131.369
.31558E+10	117.550	117.547	117.547	120.710	124.550	126.693
.63115E+10	98.8937	98.8917	98.8918	100.820	103.159	104.451
.94673E+10	91.8234	91.8217	91.8218	93.3062	95.1086	96.1004
.12623E+11	87.7814	87.7800	87.7800	89.0086	90.4997	91.3176
.15779E+11	84.9665	84.9653	84.9653	86.0248	87.3105	88.0142
.18935E+11	82.4446	82.4435	82.4435	83.3731	84.5003	85.1162
.22090E+11	80.3739	80.3729	80.3729	81.2032	82.2099	82.7587
.25246E+11	78.5670	78.5662	78.5662	79.3117	80.2152	80.7071
.28402E+11	77.0209	77.0201	77.0201	77.6974	78.5180	78.9640
.31558E+11	75.7113	75.7106	75.7106	76.3319	77.0845	77.4930

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64544.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.225	182.618	182.986	192.562	194.134	184.165
.20000E-05	215.143	215.477	215.789	223.808	224.406	214.424
31.558	215.143	215.477	215.789	223.807	224.405	214.423
.31558E+07	234.107	234.403	234.678	241.709	241.703	231.767
.63116E+07	237.201	237.492	237.762	244.658	244.577	234.652
.94673E+07	238.656	238.943	239.210	246.015	245.892	236.001
.12623E+08	239.536	239.820	240.084	246.821	246.669	236.812
.15779E+08	240.106	240.388	240.649	247.331	247.159	237.336
.18935E+08	240.470	240.750	241.009	247.644	247.457	237.667
.22090E+08	240.706	240.984	241.242	247.836	247.638	237.879
.25246E+08	240.847	241.124	241.381	247.938	247.730	238.004
.28402E+08	240.914	241.189	241.444	247.968	247.753	238.058
.31558E+08	240.925	241.199	241.453	247.945	247.725	238.061
.63115E+08	239.748	240.012	240.256	246.524	246.288	236.897
.94673E+08	237.611	237.868	238.105	244.218	243.992	234.839
.12623E+09	235.298	235.548	235.781	241.769	241.562	232.619
.15779E+09	233.125	233.371	233.598	239.484	239.296	230.535
.18935E+09	230.681	230.922	231.146	236.929	236.763	228.191
.22090E+09	228.511	228.748	228.967	234.663	234.517	226.109
.25246E+09	226.536	226.769	226.985	232.596	232.466	224.213
.28402E+09	224.083	224.313	224.526	230.074	229.971	221.864
.31558E+09	222.103	222.330	222.541	228.034	227.952	219.966
.63115E+09	203.013	203.213	203.398	208.311	208.399	201.585
.94673E+09	187.061	187.238	187.403	191.825	192.020	186.128
.12623E+10	173.254	173.413	173.561	177.579	177.852	172.698
.15779E+10	161.643	161.785	161.918	165.563	165.883	161.352
.18935E+10	152.267	152.396	152.516	155.844	156.191	152.157
.22090E+10	144.485	144.601	144.710	147.759	148.113	144.490

.25246E+10	137.631	137.738	137.838	140.648	141.004	137.725
.28402E+10	132.293	132.392	132.485	135.097	135.449	132.444
.31558E+10	127.542	127.634	127.719	130.145	130.489	127.732
.63115E+10	104.957	105.013	105.067	106.601	106.870	105.224
.94673E+10	96.4860	96.5299	96.5712	97.7699	97.9922	96.7299
.12623E+11	91.6341	91.6705	91.7048	92.7040	92.8948	91.8538
.15779E+11	88.2860	88.3174	88.3470	89.2122	89.3808	88.4850
.18935E+11	85.3531	85.3807	85.4067	86.1691	86.3207	85.5374
.22090E+11	82.9693	82.9940	83.0173	83.7007	83.8390	83.1411
.25246E+11	80.8953	80.9174	80.9383	81.5539	81.6802	81.0551
.28402E+11	79.1344	79.1545	79.1735	79.7342	79.8507	79.2838
.31558E+11	77.6486	77.6671	77.6846	78.2001	78.3082	77.7889

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64545.010
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	165.513	164.687	163.835	149.017	123.959	83.2196
.20000E-05	196.414	195.602	194.764	179.952	156.158	119.173
31.558	196.415	195.602	194.764	179.952	156.158	119.173
.31558E+07	214.277	213.479	212.656	197.984	175.045	140.278
.63116E+07	217.255	216.461	215.641	201.027	178.263	143.937
.94673E+07	218.699	217.909	217.093	202.549	179.935	145.936
.12623E+08	219.595	218.808	217.996	203.516	181.032	147.299
.15779E+08	220.195	219.411	218.603	204.183	181.816	148.311
.18935E+08	220.598	219.818	219.013	204.651	182.393	149.093
.22090E+08	220.879	220.101	219.300	204.994	182.838	149.727
.25246E+08	221.068	220.294	219.495	205.244	183.186	150.251
.28402E+08	221.185	220.414	219.618	205.420	183.456	150.687
.31558E+08	221.249	220.481	219.688	205.542	183.669	151.057
.63115E+08	220.600	219.855	219.088	205.391	184.268	152.912
.94673E+08	218.968	218.244	217.497	204.184	183.674	153.300
.12623E+09	217.119	216.412	215.684	202.707	182.727	153.180
.15779E+09	215.354	214.663	213.951	201.264	181.738	152.891
.18935E+09	213.339	212.664	211.968	199.580	180.519	152.380
.22090E+09	211.542	210.880	210.199	198.072	179.414	151.885
.25246E+09	209.914	209.266	208.598	196.715	178.436	151.483
.28402E+09	207.809	207.173	206.517	194.864	176.926	150.472
.31558E+09	206.119	205.493	204.848	193.387	175.738	149.708
.63115E+09	189.746	189.218	188.673	179.060	164.167	142.192
.94673E+09	175.878	175.425	174.957	166.771	153.988	135.113
.12623E+10	163.703	163.309	162.903	155.827	144.670	128.190
.15779E+10	153.424	153.080	152.725	146.565	136.791	122.326
.18935E+10	145.088	144.783	144.470	139.033	130.360	117.505
.22090E+10	138.138	137.866	137.586	132.740	124.975	113.447
.25246E+10	131.967	131.721	131.468	127.107	120.086	109.646
.28402E+10	127.158	126.933	126.702	122.722	116.293	106.719
.31558E+10	122.877	122.671	122.459	118.824	112.933	104.149
.63115E+10	102.310	102.188	102.063	99.9412	96.4437	91.2081
.94673E+10	94.4939	94.4013	94.3062	92.6954	90.0261	86.0196
.12623E+11	90.0078	89.9316	89.8534	88.5329	86.3351	83.0306
.15779E+11	86.8959	86.8305	86.7633	85.6305	83.7405	80.8951
.18935E+11	84.1465	84.0895	84.0308	83.0438	81.3920	78.9016
.22090E+11	81.9011	81.8503	81.7981	80.9214	79.4506	77.2300
.25246E+11	79.9435	79.8980	79.8513	79.0681	77.7509	75.7600
.28402E+11	78.2753	78.2342	78.1919	77.4832	76.2893	74.4829
.31558E+11	76.8648	76.8271	76.7884	76.1407	75.0474	73.3917

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 06:24:22 JUN 20, 1995 CP= 64545.020
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP s20o135	2517 TEMP t20o135	3956 TEMP i20o135	4591 TEMP o20o135	2441 TEMP c14i135	1861 TEMP c18i135
.10000E-05	35.5294	34.0292	29.4547	26.1400	160.477	160.477
.20000E-05	77.2882	75.9766	71.8400	68.7948	190.812	190.805
31.558	77.2881	75.9765	71.8400	68.7948	190.812	190.804
.31558E+07	101.763	100.558	96.6866	93.7920	208.537	208.364
.63116E+07	106.056	104.872	101.064	98.1973	211.498	211.320
.94673E+07	108.502	107.333	103.568	100.732	212.947	212.769
.12623E+08	110.220	109.063	105.333	102.525	213.852	213.674
.15779E+08	111.534	110.386	106.686	103.902	214.464	214.286
.18935E+08	112.583	111.445	107.771	105.008	214.882	214.704
.22090E+08	113.460	112.329	108.680	105.935	215.179	215.001
.25246E+08	114.209	113.085	109.459	106.732	215.385	215.207
.28402E+08	114.855	113.739	110.134	107.423	215.519	215.342
.31558E+08	115.425	114.315	110.730	108.035	215.601	215.424
.63115E+08	118.828	117.767	114.340	111.765	215.122	214.948
.94673E+08	120.398	119.376	116.069	113.587	213.650	213.477
.12623E+09	121.259	120.269	117.062	114.657	211.946	211.775
.15779E+09	121.793	120.829	117.707	115.365	210.308	210.139
.18935E+09	122.104	121.166	118.128	115.851	208.425	208.258
.22090E+09	122.317	121.401	118.435	116.213	206.743	206.577
.25246E+09	122.579	121.684	118.787	116.617	205.222	205.058
.28402E+09	122.132	121.254	118.415	116.288	203.222	203.061
.31558E+09	121.849	120.986	118.197	116.107	201.617	201.458
.63115E+09	118.869	118.148	115.822	114.083	186.070	185.929
.94673E+09	115.181	114.566	112.585	111.105	172.850	172.724
.12623E+10	110.823	110.287	108.567	107.281	161.169	161.056
.15779E+10	107.113	106.644	105.141	104.018	151.275	151.173
.18935E+10	104.006	103.590	102.259	101.265	143.225	143.131
.22090E+10	101.358	100.985	99.7954	98.9071	136.508	136.421
.25246E+10	98.7041	98.3668	97.2914	96.4918	130.524	130.444
.28402E+10	96.6933	96.3843	95.3998	94.6701	125.860	125.785
.31558E+10	94.9590	94.6757	93.7740	93.1075	121.707	121.636
.63115E+10	85.7577	85.5898	85.0593	84.6696	101.676	101.629
.94673E+10	81.8489	81.7204	81.3156	81.0186	94.0262	93.9884
.12623E+11	79.5908	79.4847	79.1511	78.9069	89.6321	89.5998
.15779E+11	77.9323	77.8409	77.5540	77.3438	86.5777	86.5493
.18935E+11	76.3080	76.2279	75.9768	75.7932	83.8729	83.8479
.22090E+11	74.9166	74.8452	74.6216	74.4580	81.6609	81.6385
.25246E+11	73.6855	73.6214	73.4209	73.2745	79.7311	79.7108
.28402E+11	72.5998	72.5417	72.3600	72.2272	78.0851	78.0664
.31558E+11	71.6656	71.6123	71.4456	71.3241	76.6924	76.6749

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts21180

*** WARNING *** CP= 64545.160 TIME= 06:24:22
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t021180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s021180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h021180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c021180

VARIABLE 7	IS AT NODE	59	ITEM= TEMP COMP=	NAME= h02o180
VARIABLE 8	IS AT NODE	14	ITEM= TEMP COMP=	NAME= s02o180
VARIABLE 9	IS AT NODE	135	ITEM= TEMP COMP=	NAME= t02o180
VARIABLE 10	IS AT NODE	620	ITEM= TEMP COMP=	NAME= s10i180
VARIABLE 11	IS AT NODE	699	ITEM= TEMP COMP=	NAME= h10i180
VARIABLE 12	IS AT NODE	701	ITEM= TEMP COMP=	NAME= c10i180
VARIABLE 13	IS AT NODE	703	ITEM= TEMP COMP=	NAME= h10o180
VARIABLE 14	IS AT NODE	666	ITEM= TEMP COMP=	NAME= s10o180
VARIABLE 15	IS AT NODE	659	ITEM= TEMP COMP=	NAME= t10o180
VARIABLE 16	IS AT NODE	765	ITEM= TEMP COMP=	NAME= s16i180
VARIABLE 17	IS AT NODE	844	ITEM= TEMP COMP=	NAME= h16i180
VARIABLE 18	IS AT NODE	846	ITEM= TEMP COMP=	NAME= c16i180
VARIABLE 19	IS AT NODE	848	ITEM= TEMP COMP=	NAME= h16o180
VARIABLE 20	IS AT NODE	811	ITEM= TEMP COMP=	NAME= s16o180
VARIABLE 21	IS AT NODE	804	ITEM= TEMP COMP=	NAME= t16o180
VARIABLE 22	IS AT NODE	910	ITEM= TEMP COMP=	NAME= s22i180
VARIABLE 23	IS AT NODE	989	ITEM= TEMP COMP=	NAME= h22i180
VARIABLE 24	IS AT NODE	991	ITEM= TEMP COMP=	NAME= c22i180
VARIABLE 25	IS AT NODE	993	ITEM= TEMP COMP=	NAME= h22o180
VARIABLE 26	IS AT NODE	956	ITEM= TEMP COMP=	NAME= s22o180
VARIABLE 27	IS AT NODE	949	ITEM= TEMP COMP=	NAME= t22o180
VARIABLE 28	IS AT NODE	4028	ITEM= TEMP COMP=	NAME= i22i180
VARIABLE 29	IS AT NODE	3931	ITEM= TEMP COMP=	NAME= i22o180
VARIABLE 30	IS AT NODE	4565	ITEM= TEMP COMP=	NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3544 TEMP	ts2i180	75.70	.3156E+11	207.6	.3156E+08
3 NSOL	104 TEMP	t02i180	75.70	.3156E+11	207.6	.3156E+08
4 NSOL	29 TEMP	s02i180	75.70	.3156E+11	207.7	.3156E+08
5 NSOL	55 TEMP	h02i180	76.61	.3156E+11	222.8	.3156E+08
6 NSOL	57 TEMP	c02i180	77.08	.3156E+11	230.7	.3156E+08
7 NSOL	59 TEMP	h02o180	77.22	.3156E+11	233.3	.3156E+08
8 NSOL	14 TEMP	s02o180	77.02	.3156E+11	230.7	.3156E+08
9 NSOL	135 TEMP	t02o180	77.02	.3156E+11	230.7	.3156E+08
10 NSOL	620 TEMP	s10i180	77.02	.3156E+11	230.7	.3156E+08
11 NSOL	699 TEMP	h10i180	77.38	.3156E+11	235.3	.3156E+08
12 NSOL	701 TEMP	c10i180	77.42	.3156E+11	235.0	.3156E+08
13 NSOL	703 TEMP	h10o180	77.17	.3156E+11	230.5	.3156E+08
14 NSOL	666 TEMP	s10o180	76.60	.3156E+11	221.0	.3156E+08
15 NSOL	659 TEMP	t10o180	76.60	.3156E+11	220.9	.3156E+08
16 NSOL	765 TEMP	s16i180	76.60	.3156E+11	220.9	.3156E+08
17 NSOL	844 TEMP	h16i180	76.64	.3156E+11	219.5	.3156E+08

18 NSOL	846 TEMP	c16i180	76.35	.3156E+11	213.1	.3156E+08
19 NSOL	848 TEMP	h16o180	75.79	.3156E+11	202.2	.6312E+08
20 NSOL	811 TEMP	s16o180	74.92	.3156E+11	186.5	.6312E+08
21 NSOL	804 TEMP	t16o180	74.91	.3156E+11	186.4	.6312E+08
22 NSOL	910 TEMP	s22i180	74.91	.3156E+11	186.4	.6312E+08
23 NSOL	989 TEMP	h22i180	74.82	.3156E+11	183.0	.6312E+08
24 NSOL	991 TEMP	c22i180	74.44	.3156E+11	175.0	.6312E+08
25 NSOL	993 TEMP	h22o180	73.78	.3156E+11	162.2	.9467E+08
26 NSOL	956 TEMP	s22o180	66.48	.1000E-05	141.8	.1262E+09
27 NSOL	949 TEMP	t22o180	66.37	.1000E-05	141.7	.1262E+09
28 NSOL	4028 TEMP	i22i180	29.31	.1000E-05	118.8	.2525E+09
29 NSOL	3931 TEMP	i22o180	28.35	.1000E-05	117.9	.2525E+09
30 NSOL	4565 TEMP	j22o180	26.14	.1000E-05	116.2	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.890
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.061	139.072	139.177	158.714	168.730	172.061
.20000E-05	176.526	176.537	176.639	194.047	203.078	206.127
31.558	176.526	176.537	176.639	194.047	203.077	206.127
.31558E+07	198.600	198.610	198.709	214.798	223.119	225.900
.63116E+07	202.183	202.193	202.291	218.158	226.374	229.118
.94673E+07	203.983	203.994	204.091	219.803	227.942	230.661
.12623E+08	205.134	205.145	205.242	220.831	228.909	231.608
.15779E+08	205.933	205.944	206.040	221.526	229.554	232.235
.18935E+08	206.499	206.509	206.605	222.001	229.982	232.648
.22090E+08	206.918	206.928	207.024	222.337	230.278	232.930
.25246E+08	207.228	207.238	207.333	222.571	230.474	233.113
.28402E+08	207.452	207.463	207.557	222.725	230.592	233.218
.31558E+08	207.612	207.622	207.717	222.818	230.651	233.266
.63115E+08	207.596	207.606	207.697	222.281	229.850	232.372
.94673E+08	206.347	206.357	206.445	220.634	228.000	230.451
.12623E+09	204.775	204.784	204.870	218.729	225.926	228.316
.15779E+09	203.228	203.237	203.321	216.901	223.954	226.293
.18935E+09	201.417	201.426	201.507	214.806	221.713	224.000
.22090E+09	199.794	199.803	199.883	212.937	219.717	221.959
.25246E+09	198.341	198.350	198.428	211.250	217.909	220.109
.28402E+09	196.327	196.335	196.412	209.038	215.596	217.759
.31558E+09	194.725	194.734	194.809	207.264	213.735	215.867
.63115E+09	179.397	179.404	179.467	190.210	195.811	197.644
.94673E+09	166.439	166.445	166.498	175.895	180.794	182.383
.12623E+10	155.018	155.023	155.068	163.402	167.744	169.136
.15779E+10	145.485	145.490	145.530	152.937	156.794	158.017
.18935E+10	137.803	137.806	137.842	144.479	147.942	149.034
.22090E+10	131.434	131.438	131.469	137.463	140.590	141.572
.25246E+10	125.748	125.751	125.779	131.241	134.091	134.982
.28402E+10	121.350	121.353	121.379	126.412	129.038	129.856
.31558E+10	117.466	117.469	117.492	122.130	124.550	125.301
.63115E+10	98.8452	98.8466	98.8604	101.685	103.159	103.608
.94673E+10	91.7864	91.7874	91.7978	93.9728	95.1086	95.4523
.12623E+11	87.7510	87.7518	87.7604	89.5602	90.4997	90.7823
.15779E+11	84.9403	84.9410	84.9483	86.5004	87.3105	87.5533
.18935E+11	82.4218	82.4224	82.4288	83.7901	84.5003	84.7126
.22090E+11	80.3536	80.3541	80.3598	81.5756	82.2099	82.3988
.25246E+11	78.5489	78.5494	78.5545	79.6460	80.2152	80.3843
.28402E+11	77.0045	77.0049	77.0095	78.0011	78.5180	78.6712
.31558E+11	75.6963	75.6967	75.7009	76.6104	77.0845	77.2246

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP s02o180	135 TEMP t02o180	620 TEMP s10i180	699 TEMP h10i180	701 TEMP c10i180	703 TEMP h10o180
.10000E-05	168.702	168.700	168.717	175.449	175.913	170.948
.20000E-05	203.229	203.226	203.241	208.848	208.914	204.142
31.558	203.229	203.227	203.242	208.848	208.913	204.142
.31558E+07	223.190	223.187	223.201	228.113	227.916	223.237
.63116E+07	226.442	226.439	226.453	231.267	231.040	226.384
.94673E+07	228.008	228.005	228.018	232.770	232.528	227.896
.12623E+08	228.974	228.971	228.984	233.689	233.437	228.826
.15779E+08	229.617	229.614	229.627	234.293	234.034	229.444
.18935E+08	230.044	230.041	230.054	234.688	234.424	229.853
.22090E+08	230.337	230.334	230.347	234.954	234.686	230.133
.25246E+08	230.531	230.528	230.541	235.122	234.852	230.316
.28402E+08	230.647	230.644	230.656	235.215	234.943	230.424
.31558E+08	230.704	230.701	230.714	235.251	234.978	230.475
.63115E+08	229.884	229.882	229.894	234.279	234.008	229.644
.94673E+08	228.018	228.015	228.027	232.307	232.048	227.799
.12623E+09	225.928	225.925	225.937	230.133	229.888	225.741
.15779E+09	223.943	223.940	223.952	228.079	227.848	223.787
.18935E+09	221.688	221.685	221.696	225.756	225.540	221.568
.22090E+09	219.681	219.678	219.689	223.690	223.486	219.592
.25246E+09	217.861	217.859	217.870	221.813	221.620	217.799
.28402E+09	215.537	215.535	215.545	219.447	219.269	215.515
.31558E+09	213.669	213.666	213.677	217.541	217.376	213.678
.63115E+09	195.688	195.686	195.695	199.154	199.084	195.931
.94673E+09	180.629	180.627	180.635	183.750	183.746	181.022
.12623E+10	167.535	167.534	167.540	170.384	170.430	168.043
.15779E+10	156.557	156.556	156.562	159.149	159.225	157.121
.18935E+10	147.702	147.701	147.706	150.065	150.156	148.280
.22090E+10	140.355	140.354	140.359	142.516	142.614	140.930
.25246E+10	133.862	133.861	133.866	135.853	135.957	134.431
.28402E+10	128.816	128.815	128.819	130.667	130.773	129.372
.31558E+10	124.334	124.334	124.337	126.053	126.159	124.872
.63115E+10	102.995	102.995	102.997	104.084	104.172	103.400
.94673E+10	94.9724	94.9721	94.9738	95.8214	95.8952	95.3018
.12623E+11	90.3809	90.3806	90.3821	91.0889	91.1526	90.6622
.15779E+11	87.2051	87.2048	87.2060	87.8182	87.8746	87.4520
.18935E+11	84.4053	84.4050	84.4061	84.9456	84.9965	84.6265
.22090E+11	82.1228	82.1226	82.1235	82.6075	82.6540	82.3239
.25246E+11	80.1354	80.1352	80.1360	80.5719	80.6145	80.3185
.28402E+11	78.4440	78.4439	78.4446	78.8419	78.8812	78.6124
.31558E+11	77.0155	77.0154	77.0161	77.3812	77.4177	77.1713

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	159.460	159.423	159.407	159.335	152.839	140.500
.20000E-05	193.614	193.577	193.559	192.655	186.082	174.345

31.558	193.615	193.578	193.559	192.654	186.082	174.345
.31558E+07	213.236	213.199	213.179	211.825	205.225	193.822
.63116E+07	216.481	216.443	216.423	215.017	208.435	197.113
.94673E+07	218.068	218.031	218.010	216.580	210.023	198.775
.12623E+08	219.061	219.023	219.003	217.558	211.026	199.841
.15779E+08	219.732	219.695	219.674	218.220	211.713	200.584
.18935E+08	220.189	220.152	220.132	218.673	212.190	201.114
.22090E+08	220.514	220.477	220.457	218.995	212.536	201.509
.25246E+08	220.739	220.703	220.682	219.220	212.784	201.804
.28402E+08	220.887	220.850	220.830	219.368	212.955	202.020
.31558E+08	220.976	220.939	220.919	219.459	213.069	202.177
.63115E+08	220.449	220.414	220.395	218.971	212.782	202.249
.94673E+08	218.846	218.812	218.793	217.419	211.404	201.165
.12623E+09	216.993	216.960	216.941	215.618	209.757	199.771
.15779E+09	215.214	215.181	215.164	213.887	208.159	198.391
.18935E+09	213.173	213.141	213.124	211.896	206.306	196.762
.22090E+09	211.351	211.320	211.304	210.119	204.648	195.299
.25246E+09	209.705	209.675	209.658	208.513	203.154	193.989
.28402E+09	207.550	207.520	207.504	206.403	201.149	192.153
.31558E+09	205.822	205.793	205.778	204.713	199.546	190.693
.63115E+09	189.167	189.143	189.130	188.377	184.065	176.579
.94673E+09	175.113	175.093	175.083	174.566	170.914	164.481
.12623E+10	162.808	162.791	162.782	162.443	159.301	153.684
.15779E+10	152.468	152.453	152.446	152.227	149.497	144.564
.18935E+10	144.113	144.100	144.094	143.948	141.544	137.165
.22090E+10	137.169	137.158	137.153	137.061	134.922	130.998
.25246E+10	131.006	130.996	130.991	130.941	129.019	125.468
.28402E+10	126.217	126.208	126.204	126.181	124.430	121.176
.31558E+10	121.966	121.957	121.954	121.952	120.354	117.370
.63115E+10	101.629	101.624	101.622	101.680	100.751	98.9733
.94673E+10	93.9352	93.9316	93.9301	93.9884	93.2837	91.9236
.12623E+11	89.5296	89.5266	89.5254	89.5812	89.0033	87.8818
.15779E+11	86.4747	86.4721	86.4711	86.5229	86.0272	85.0621
.18935E+11	83.7690	83.7667	83.7659	83.8151	83.3831	82.5390
.22090E+11	81.5576	81.5557	81.5549	81.6018	81.2181	80.4658
.25246E+11	79.6303	79.6285	79.6278	79.6721	79.3292	78.6551
.28402E+11	77.9869	77.9854	77.9847	78.0267	77.7165	77.1050
.31558E+11	76.5973	76.5959	76.5953	76.6351	76.3514	75.7912

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	120.865	120.805	120.769	118.133	108.942	93.0555
.20000E-05	156.239	156.178	156.141	152.988	144.118	129.292
31.558	156.239	156.178	156.141	152.988	144.118	129.292
.31558E+07	176.602	176.541	176.503	173.037	164.376	150.149
.63116E+07	180.062	180.001	179.963	176.467	167.859	153.773
.94673E+07	181.856	181.795	181.757	178.252	169.695	155.720
.12623E+08	183.032	182.971	182.933	179.427	170.915	157.033
.15779E+08	183.871	183.810	183.772	180.270	171.799	157.998
.18935E+08	184.488	184.427	184.389	180.894	172.462	158.736
.22090E+08	184.964	184.904	184.866	181.378	172.983	159.326
.25246E+08	185.335	185.275	185.238	181.758	173.400	159.809
.28402E+08	185.624	185.564	185.527	182.057	173.733	160.205
.31558E+08	185.851	185.791	185.754	182.294	174.004	160.536
.63115E+08	186.490	186.433	186.396	183.041	175.038	162.060
.94673E+08	185.861	185.806	185.771	182.517	174.754	162.171
.12623E+09	184.857	184.803	184.769	181.611	174.055	161.810
.15779E+09	183.809	183.757	183.723	180.649	173.272	161.314

.18935E+09	182.518	182.467	182.435	179.448	172.254	160.590
.22090E+09	181.349	181.299	181.267	178.358	171.322	159.911
.25246E+09	180.314	180.265	180.234	177.395	170.509	159.336
.28402E+09	178.722	178.674	178.644	175.878	169.128	158.168
.31558E+09	177.470	177.423	177.393	174.688	168.053	157.273
.63115E+09	165.343	165.305	165.281	163.125	157.576	148.498
.94673E+09	154.772	154.739	154.720	152.966	148.231	140.461
.12623E+10	145.165	145.137	145.120	143.660	139.559	132.799
.15779E+10	137.072	137.049	137.034	135.806	132.232	126.317
.18935E+10	130.495	130.474	130.461	129.409	126.252	121.010
.22090E+10	125.006	124.987	124.976	124.063	121.247	116.557
.25246E+10	120.034	120.018	120.008	119.207	116.671	112.433
.28402E+10	116.187	116.172	116.163	115.448	113.132	109.253
.31558E+10	112.788	112.774	112.766	112.126	110.009	106.456
.63115E+10	96.2249	96.2171	96.2126	95.8739	94.6320	92.5300
.94673E+10	89.8156	89.8097	89.8064	89.5597	88.6157	87.0119
.12623E+11	86.1409	86.1360	86.1333	85.9361	85.1605	83.8398
.15779E+11	83.5624	83.5583	83.5559	83.3891	82.7228	81.5868
.18935E+11	81.2255	81.2219	81.2199	81.0772	80.4958	79.5028
.22090E+11	79.2939	79.2907	79.2889	79.1643	78.6472	77.7628
.25246E+11	77.6040	77.6011	77.5995	77.4897	77.0272	76.2349
.28402E+11	76.1508	76.1482	76.1468	76.0487	75.6298	74.9114
.31558E+11	74.9163	74.9140	74.9127	74.8240	74.4406	73.7826

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:24:25 JUN 20, 1995 CP= 64548.940
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4811	66.3728	29.3058	28.3478	26.1400
.20000E-05	104.732	104.617	72.0571	71.0037	68.7719
.31.558	104.732	104.617	72.0571	71.0037	68.7719
.31558E+07	126.759	126.642	96.6620	95.5605	93.2974
.63116E+07	130.626	130.509	101.060	99.9568	97.6960
.94673E+07	132.769	132.652	103.578	102.479	100.231
.12623E+08	134.245	134.129	105.353	104.257	102.024
.15779E+08	135.355	135.240	106.714	105.622	103.402
.18935E+08	136.224	136.109	107.805	106.717	104.510
.22090E+08	136.936	136.822	108.719	107.634	105.439
.25246E+08	137.534	137.419	109.502	108.421	106.237
.28402E+08	138.038	137.924	110.180	109.103	106.930
.31558E+08	138.474	138.361	110.779	109.706	107.544
.63115E+08	140.842	140.732	114.401	113.364	111.287
.94673E+08	141.628	141.522	116.132	115.127	113.120
.12623E+09	141.841	141.737	117.123	116.146	114.199
.15779E+09	141.833	141.732	117.764	116.812	114.915
.18935E+09	141.602	141.503	118.180	117.254	115.408
.22090E+09	141.350	141.253	118.483	117.579	115.777
.25246E+09	141.175	141.081	118.831	117.947	116.187
.28402E+09	140.362	140.270	118.456	117.591	115.869
.31558E+09	139.767	139.676	118.234	117.386	115.695
.63115E+09	133.841	133.767	115.824	115.129	113.729
.94673E+09	127.954	127.892	112.560	111.978	110.795
.12623E+10	121.934	121.881	108.523	108.028	107.010
.15779E+10	116.825	116.779	105.085	104.659	103.777
.18935E+10	112.605	112.565	102.193	101.822	101.046
.22090E+10	109.044	109.009	99.7240	99.3964	98.7068
.25246E+10	105.648	105.616	97.2179	96.9257	96.3087
.28402E+10	103.045	103.016	95.3247	95.0600	94.4996
.31558E+10	100.771	100.745	93.6978	93.4575	92.9476
.63115E+10	89.1822	89.1674	84.9934	84.8587	84.5670
.94673E+10	84.4595	84.4485	81.2570	81.1565	80.9364

.12623E+11	81.7388	81.7298	79.0987	79.0168	78.8368
.15779E+11	79.7803	79.7726	77.5064	77.4366	77.2823
.18935E+11	77.9237	77.9170	75.9341	75.8735	75.7393
.22090E+11	76.3563	76.3504	74.5823	74.5289	74.4097
.25246E+11	74.9750	74.9697	73.3846	73.3369	73.2307
.28402E+11	73.7692	73.7644	72.3259	72.2830	72.1868
.31558E+11	72.7363	72.7320	71.4134	71.3742	71.2864

***** ROUTINE COMPLETED ***** CP = 64548.960

End of batch input file

PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44w.db
FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 29
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

```
*-----*
|
|               ANSYS RUN COMPLETED
|
|-----|
|
|   REV. 5.0 A               HP 9000/7XX
|
| CP TIME      (sec) =      64553.030      TIME = 06:24:30
| ELAPSED TIME (sec) =      73500.000      DATE  = 06/20/95
|
|-----|
*-----*
```

WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****

JOB NAME = ucf44j
 MEMORY REQUESTED (MB) = 64.0
 BATCH MODE REQUESTED
 start.ans FILE

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	16777216	64.000 MB	COMMAND LINE
MINIMUM WORK SPACE REQUIRED	=	4718592	18.000 MB	
MINIMUM WORK SPACE RECOMMENDED	=	6702496	25.568 MB	
WORK SPACE OBTAINED	=	16777214	64.000 MB	
BYTES PER WORD	=	4		

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 ERRORS ENCOUNTERED IN EITHER THE DOCUMENTATION OR THE
 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
 ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
 ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

```

1 /COM, *****
2 /COM, ANSYS REVISION 5.0A 6/16/1995
3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
4 /COM, *****
5 /COM, *
6 /COM, * File name: ucf44j.inp
7 /COM, * 44 BWR UCF with Low T.L. Disposal Container
8 /COM, * Helium Fill Gas
9 /COM, *
10 /COM, * Material Property file: props01.dat
11 /COM, *
12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes)
13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative)
14 /COM, *
15 /COM, * SNF Heat Loads file: bwr1049.dat
16 /COM, * SNF Type: 10 years old; 49000 MWd/MTU
17 /COM, *
18 /COM, * Surface Temp. file: c21j5a.parm
    
```



```

19 /COM, *      25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 67.5 m *
22 /COM, *      WP c/c spacing = 21.554 m *
23 /COM, *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,parm,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21j5a,parm,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 /COM, DCRAD=1.5260/2.0
68 /COM, OWALL=0.0500
69 /COM, IWALL=0.0200
70 /COM, DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 /COM, GCORL=320.0/1000.0
73 /COM, GCORS=181.6/1000.0
74 /COM, GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 /COM, HCELL=153.0/1000.0/2.0
79 /COM, SWALL=3.5/1000.0
80 /COM, TWALL=20.0/1000.0
81 /COM, THWLL=TWALL/2.0
82 /COM,
83 /COM, ACTVL=150.0*2.54/100.0
84 /COM, PEAKF=1.40
85 /COM, Define calculated parameters
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLUME = assy_volume=cell_width^2*active_length

```

```

89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.                (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.          (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLUME=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,          ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,          MI45=MIRAD/SQRT(2.0)
123 /COM,          MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCIRD-OWALL)/SQRT(2.0)
126 DO45=DCIRD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,          *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01,dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049,dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLUME),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTMP
181 MPTMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTMP
188 MPTMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Define new material 15 for low thermal loading
204 /COM, outer barrier of 70/30 Copper Nickel (c71500)
205 /COM, Density: DENS (kg/m^3)
206 /COM, Conductivity: KXX (W/m/K)
207 /COM, Specific Heat: C (J/kg/K)
208 MPTMP
209 MPTMP, 1, .00000E+00,
210 /COM, Density (lb/in^3 converted to kg/m^3)
211 MPDATA,DENS,15, 1,(0.323*2.768E+04),
212 /COM, Specific Heat (Btu/lb/F converted to J/kg/K)
213 MPDATA, C,15, 1,(0.09/2.3886E-04),
214 /COM, Conductivity (Btu/hr/ft/F converted to W/m/K)
215 MPTMP
216 MPTMP, 1, (5.0/9.0*(68.0-32.0)), (5.0/9.0*(212.0-32.0)),
217 MPTMP, 3, (5.0/9.0*(392.0-32.0)), (5.0/9.0*(572.0-32.0)),
218 MPTMP, 5, (5.0/9.0*(752.0-32.0)), (5.0/9.0*(932.0-32.0)),
219 MPTMP, 7, (5.0/9.0*(1112.0-32.0)), (5.0/9.0*(1292.0-32.0)),
220 MPDATA, KXX,15, 1, (17.0*1.7307), (16.9*1.7307),
221 MPDATA, KXX,15, 3, (19.7*1.7307), (22.3*1.7307),
222 MPDATA, KXX,15, 5, (24.9*1.7307), (27.8*1.7307),
223 MPDATA, KXX,15, 7, (30.7*1.7307), (33.6*1.7307),
224 /COM, *****
225 /COM, Construct geometry for Disposal Container
226 /COM,
227 /COM, Define center and axis keypoints for waste package
228 /COM, Also, create placeholder keypoints and lines

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229 /COM,          (K's 1,2,3,4,5,6,7,8)
230 /COM,          (L's 1,2,3,4)
231 K,1,0.0,0.0,0.0,
232 K,2,0.0,0.0,1.0,
233 K,3,0.0,0.0,1.3,
234 K,4,0.0,0.0,1.4,
235 K,5,0.0,0.0,1.5,
236 K,6,0.0,0.0,1.6,
237 K,7,0.0,0.0,1.7,
238 K,8,0.0,0.0,1.8,
239 L,3,4,
240 L,4,5,
241 L,5,6,
242 L,6,7,
243 /COM,          Define disposal container outer radius and material interface
244 /COM,          (K's 9,10,11,12,13,14)
245 /COM,          (L's 5,6,7,8,9,10,11)
246 /COM,          (A's 1,2)
247 K, 9,          0.0,          (0.0-DCRAD),0.0,
248 K,10,          DCRAD,          0.0,0.0,
249 K,11,          0.0,          DCRAD,0.0,
250 K,12,          0.0,          (OWALL-DCRAD),0.0,
251 K,13,          (DCRAD-OWALL), 0.0,0.0,
252 K,14,          0.0,          (DCRAD-OWALL),0.0,
253 L,10,13,
254 LARC,10, 9,1,          DCRAD,
255 LARC,11,10,1,          DCRAD,
256 LARC,13,12,1,          (DCRAD-OWALL),
257 LARC,14,13,1,          (DCRAD-OWALL),
258 L,11,14,
259 L, 9,12,
260 AL, 5, 6,11, 8,
261 AL,10, 7, 5, 9,
262 /COM,          *****
263 /COM,          Define UCF shell inner edge and area
264 /COM,          (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
265 /COM,          ( 31,32,33,34,35)
266 /COM,          (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
267 /COM,          ( 28,29,30,31,32,33,34)
268 /COM,          (A's 3,4)
269 K,15, 0.0,          DCIRD,0.0,
270 K,16, GX22,          GY22,0.0,
271 K,17, GX23,          GY23,0.0,
272 K,18, GX24,          GY24,0.0,
273 K,19, GX25,          GY25,0.0,
274 K,20, DI45,          DI45,0.0,
275 K,21, GY25,          GX25,0.0,
276 K,22, GY24,          GX24,0.0,
277 K,23, GY23,          GX23,0.0,
278 K,24, GY22,          GX22,0.0,
279 K,25,DCIRD,          0.0,0.0,
280 K,26, GY22, (0.0-GX22),0.0,
281 K,27, GY23, (0.0-GX23),0.0,
282 K,28, GY24, (0.0-GX24),0.0,
283 K,29, GY25, (0.0-GX25),0.0,
284 K,30, DI45, (0.0-DI45),0.0,
285 K,31, GX25, (0.0-GY25),0.0,
286 K,32, GX24, (0.0-GY24),0.0,
287 K,33, GX23, (0.0-GY23),0.0,
288 K,34, GX22, (0.0-GY22),0.0,
289 K,35, 0.0,(0.0-DCIRD),0.0,
290 L,14,15,
291 LARC,16,15,1,DCIRD,
292 LARC,17,16,1,DCIRD,
293 LARC,18,17,1,DCIRD,
294 LARC,19,18,1,DCIRD,
295 LARC,20,19,1,DCIRD,
296 LARC,21,20,1,DCIRD,
297 LARC,22,21,1,DCIRD,
298 LARC,23,22,1,DCIRD,

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299 LARC,24,23,1,DCIRD,
300 LARC,25,24,1,DCIRD,
301 LARC,26,25,1,DCIRD,
302 LARC,27,26,1,DCIRD,
303 LARC,28,27,1,DCIRD,
304 LARC,29,28,1,DCIRD,
305 LARC,30,29,1,DCIRD,
306 LARC,31,30,1,DCIRD,
307 LARC,32,31,1,DCIRD,
308 LARC,33,32,1,DCIRD,
309 LARC,34,33,1,DCIRD,
310 LARC,35,34,1,DCIRD,
311 L,12,35,
312 L,25,13,
313 LSEL,S,LINE,,12,22,
314 LSEL,A,LINE,,9,
315 LSEL,A,LINE,,34,
316 AL,ALL,
317 LSEL,S,LINE,,23,33,
318 LSEL,A,LINE,,8,
319 LSEL,A,LINE,,34,
320 AL,ALL,
321 LSEL,ALL,
322 /COM, *****
323 /COM, Define thermal shunts
324 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
325 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
326 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
327 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
328 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
329 /COM, ( 84,85,86,87,88,89,90,91,92)
330 /COM, (A's 5 - 26)
331 /COM,
332 /COM, horizontal thermal shunt
333 K,36, 0.0, (0.0-THWLL),0.0,
334 K,37, 0.0, THWLL,0.0,
335 K,38, THWLL, (0.0-THWLL),0.0,
336 K,39, THWLL, 0.0,0.0,
337 K,40, THWLL, THWLL,0.0,
338 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
339 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
340 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
341 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
342 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
343 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
344 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
345 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
346 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
347 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
348 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
349 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
350 /COM, vertical thermal shunt
351 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
352 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
353 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
354 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
355 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
356 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
357 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
358 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
359 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
360 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
361 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
362 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
363 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
364 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
365 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
366 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
367 /COM, Lines; shunt widths, horizontal then vertical: (35-57)
368 L,36, 1,

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369 L, 1,37,
370 L,38,39,
371 L,39,40,
372 L,41,42,
373 L,42,43,
374 L,44,45,
375 L,45,46,
376 L,47,48,
377 L,48,49,
378 L,50,51,
379 L,51,52,
380 L,53,54,
381 L,55,56,
382 L,57,58,
383 L,59,60,
384 L,37,40,
385 L, 1,39,
386 L,36,38,
387 L,61,62,
388 L,63,64,
389 L,65,66,
390 L,67,68,
391 /COM, Lines; shunt edges, horizontal then vertical: (58-92)
392 L,38,41,
393 L,39,42,
394 L,40,43,
395 L,41,44,
396 L,42,45,
397 L,43,46,
398 L,44,47,
399 L,45,48,
400 L,46,49,
401 L,47,50,
402 L,48,51,
403 L,49,52,
404 L,26,50,
405 L,25,51,
406 L,52,24,
407 L,15,53,
408 L,16,54,
409 L,53,55,
410 L,54,56,
411 L,55,57,
412 L,56,58,
413 L,57,59,
414 L,58,60,
415 L,59,37,
416 L,60,40,
417 L,36,61,
418 L,38,62,
419 L,61,63,
420 L,62,64,
421 L,63,65,
422 L,64,66,
423 L,65,67,
424 L,66,68,
425 L,67,35,
426 L,68,34,
427 /COM, define areas for thermal shunts
428 AL,35,53,37,52,
429 AL,36,52,38,51,
430 AL,37,58,39,59,
431 AL,38,59,40,60,
432 AL,39,61,41,62,
433 AL,40,62,42,63,
434 AL,41,64,43,65,
435 AL,42,65,44,66,
436 AL,43,67,45,68,
437 AL,44,68,46,69,
438 AL,45,70,23,71,

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439 AL,46,71,22,72,
440 AL,73,47,74,13,
441 AL,75,48,76,47,
442 AL,77,49,78,48,
443 AL,79,50,80,49,
444 AL,81,51,82,50,
445 AL,83,54,84,53,
446 AL,85,55,86,54,
447 AL,87,56,88,55,
448 AL,89,57,90,56,
449 AL,91,32,92,57,
450 /COM, *****
451 /COM,      Define tube guides
452 /COM,      (K's 69 - 92)
453 /COM,      (L's 93 - 136)
454 /COM,      (A's 27 - 46)
455 /COM,
456 /COM,      top guide
457 K,69,      (THWLL+1.0*PITCH),      (THWLL+4.0*PITCH),0.0,
458 K,70,(THWLL+1.0*PITCH+GWALL),      (THWLL+4.0*PITCH),0.0,
459 K,71,      (THWLL+1.0*PITCH),      (THWLL+3.0*PITCH),0.0,
460 K,72,(THWLL+1.0*PITCH+GWALL),      (THWLL+3.0*PITCH+GWALL),0.0,
461 K,73,      (THWLL+2.0*PITCH),      (THWLL+3.0*PITCH),0.0,
462 K,74,      (THWLL+2.0*PITCH),      (THWLL+3.0*PITCH+GWALL),0.0,
463 K,75,      (THWLL+3.0*PITCH),      (THWLL+2.0*PITCH),0.0,
464 K,76,(THWLL+3.0*PITCH+GWALL),      (THWLL+2.0*PITCH),0.0,
465 K,77,      (THWLL+3.0*PITCH),      (THWLL+1.0*PITCH),0.0,
466 K,78,(THWLL+3.0*PITCH+GWALL),      (THWLL+1.0*PITCH+GWALL),0.0,
467 K,79,      (THWLL+4.0*PITCH),      (THWLL+1.0*PITCH),0.0,
468 K,80,      (THWLL+4.0*PITCH),      (THWLL+1.0*PITCH+GWALL),0.0,
469 /COM,      bottom guide
470 K,81,      (THWLL+4.0*PITCH),      (-1.0*PITCH-THWLL),0.0,
471 K,82,      (THWLL+4.0*PITCH),      (-1.0*PITCH-GWALL-THWLL),0.0,
472 K,83,      (THWLL+3.0*PITCH),      (-1.0*PITCH-THWLL),0.0,
473 K,84,(THWLL+3.0*PITCH+GWALL),      (-1.0*PITCH-GWALL-THWLL),0.0,
474 K,85,      (THWLL+3.0*PITCH),      (-2.0*PITCH-THWLL),0.0,
475 K,86,(THWLL+3.0*PITCH+GWALL),      (-2.0*PITCH-THWLL),0.0,
476 K,87,      (THWLL+2.0*PITCH),      (-3.0*PITCH-THWLL),0.0,
477 K,88,      (THWLL+2.0*PITCH),      (-3.0*PITCH-GWALL-THWLL),0.0,
478 K,89,      (THWLL+1.0*PITCH),      (-3.0*PITCH-THWLL),0.0,
479 K,90,(THWLL+1.0*PITCH+GWALL),      (-3.0*PITCH-GWALL-THWLL),0.0,
480 K,91,      (THWLL+1.0*PITCH),      (-4.0*PITCH-THWLL),0.0,
481 K,92,(THWLL+1.0*PITCH+GWALL),      (-4.0*PITCH-THWLL),0.0,
482 /COM,
483 /COM,      top guide
484 L,69,17,
485 L,18,70,
486 L,71,69,
487 L,70,72,
488 L,73,71,
489 L,72,74,
490 L,20,73,
491 L,74,19,
492 L,75,20,
493 L,21,76,
494 L,77,75,
495 L,76,78,
496 L,79,77,
497 L,78,80,
498 L,23,79,
499 L,80,22,
500 /COM,      bottom guide
501 L,81,27,
502 L,28,82,
503 L,83,81,
504 L,82,84,
505 L,85,83,
506 L,84,86,
507 L,30,85,
508 L,86,29,

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509 L,87,30,
510 L,31,88,
511 L,89,87,
512 L,88,90,
513 L,91,89,
514 L,90,92,
515 L,33,91,
516 L,92,32,
517 /COM,          Guide thickness lines
518 L,69,70,
519 L,71,72,
520 L,73,74,
521 L,75,76,
522 L,77,78,
523 L,79,80,
524 L,82,81,
525 L,84,83,
526 L,86,85,
527 L,88,87,
528 L,90,89,
529 L,92,91,
530 /COM,          Guide steel
531 AL, 93,125, 94, 15,
532 AL, 95,126, 96,125,
533 AL, 97,127, 98,126,
534 AL, 99, 17,100,127,
535 AL,101,128,102, 18,
536 AL,103,129,104,128,
537 AL,105,130,106,129,
538 AL,107, 20,108,130,
539 AL,109,131,110, 25,
540 AL,111,132,112,131,
541 AL,113,133,114,132,
542 AL,115, 27,116,133,
543 AL,117,134,118, 28,
544 AL,119,135,120,134,
545 AL,121,136,122,135,
546 AL,123, 30,124,136,
547 /COM,          Guide gaps
548 AL, 16, 94, 96, 98,100,
549 AL, 19,102,104,106,108,
550 AL, 26,110,112,114,116,
551 AL, 29,118,120,122,124,
552 /COM,          *****
553 /COM,          Define shell gaps at the exterior of the tube array
554 /COM,          (L's 137 - 140)
555 /COM,          (A's 47 - 50)
556 /COM,
557 L, 54, 69,
558 L, 79, 52,
559 L, 50, 81,
560 L, 91, 68,
561 /COM,
562 AL, 14, 74,137, 93,
563 AL, 21,107,138, 72,
564 AL, 24, 70,139,109,
565 AL, 31,123,140, 92,
566 /COM,          *****
567 /COM,          Define center full-tube
568 /COM,          (K's 93 - 100)
569 /COM,          (L's 141 - 152)
570 /COM,          (A's 51 - 56)
571 K, 93,          THWLL,          THWLL,0.0,
572 K, 94,          THWLL,          (THWLL+PITCH),0.0,
573 K, 95,          (THWLL+PITCH), (THWLL+PITCH),0.0,
574 K, 96,          (THWLL+PITCH),          THWLL,0.0,
575 K, 97,          (THWLL+SWALL), (THWLL+SWALL),0.0,
576 K, 98,          (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
577 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
578 K,100,(PITCH+THWLL-SWALL), (THWLL+SWALL),0.0,

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579 L, 93, 97,
580 L, 94, 98,
581 L, 96, 100,
582 L, 95, 99,
583 L, 96, 93,
584 L, 100, 97,
585 L, 98, 99,
586 L, 94, 95,
587 L, 93, 94,
588 L, 97, 98,
589 L, 99, 100,
590 L, 95, 96,
591 AL, 149, 141, 150, 142,
592 AL, 145, 143, 146, 141,
593 AL, 152, 144, 151, 143,
594 AL, 148, 142, 147, 144,
595 AL, 150, 146, 151, 147,
596 /COM, *****
597 /COM, Set element shapes and sizes for tubes
598 /COM, 8x8 mesh in fuel with 2
599 /COM, divisions per tube layer
600 ESHAPE, 2,
601 ESIZE, 1,
602 LSEL, S, LINE, 145, 152, 1,
603 LESIZE, ALL, 8,
604 LSEL, S, LINE, 141, 144, 1,
605 LESIZE, ALL, 2,
606 LSEL, ALL,
607 /COM,
608 /COM, Mesh areas
609 /COM, first fuel, then stainless tubes
610 MAT, 14,
611 TYPE, 1,
612 AMESH, 55,
613 MAT, 1,
614 TYPE, 1,
615 AMESH, 51, 54, 1,
616 /COM, *****
617 /COM, Copy tube mesh
618 /COM,
619 /COM, center full tube side, above, and below
620 /COM, (A's 56 - 60 = Side 1)
621 AGEN, 2, 51, 55, 1, (1.0*PITCH), 0.0, 0.0, 0.0,
622 /COM, (A's 61 - 65 = Side 2)
623 AGEN, 2, 51, 55, 1, (2.0*PITCH), 0.0, 0.0, 0.0,
624 /COM, (A's 66 - 70 = Side 3)
625 AGEN, 2, 51, 55, 1, (3.0*PITCH), 0.0, 0.0, 0.0,
626 /COM,
627 /COM, (A's 71 - 75 = up 1)
628 AGEN, 2, 51, 55, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
629 /COM, (A's 76 - 80 = up 2)
630 AGEN, 2, 51, 55, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
631 /COM, (A's 81 - 85 = up 3)
632 AGEN, 2, 51, 55, 1, 0.0, (3.0*PITCH), 0.0, 0.0,
633 /COM,
634 /COM, (A's 86 - 90 = down 1)
635 AGEN, 2, 51, 55, 1, 0.0, (-1.0*PITCH-TWALL), 0.0, 0.0,
636 /COM, (A's 91 - 95 = down 2)
637 AGEN, 2, 51, 55, 1, 0.0, (-2.0*PITCH-TWALL), 0.0, 0.0,
638 /COM, (A's 96 - 100 = down 3)
639 AGEN, 2, 51, 55, 1, 0.0, (-3.0*PITCH-TWALL), 0.0, 0.0,
640 /COM, (A's 101 - 105 = down 4)
641 AGEN, 2, 51, 55, 1, 0.0, (-4.0*PITCH-TWALL), 0.0, 0.0,
642 /COM,
643 /COM, (A's 106 - 110 = up 1)
644 AGEN, 2, 56, 60, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
645 /COM, (A's 111 - 115 = up 2)
646 AGEN, 2, 56, 60, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
647 /COM,
648 /COM, (A's 116 - 120 = down 1)

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649 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
650 /COM, (A's 121 - 125 = down 2)
651 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
652 /COM, (A's 126 - 130 = down 3)
653 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
654 /COM,
655 /COM, (A's 131 - 135 = up 1)
656 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
657 /COM, (A's 136 - 140 = up 2)
658 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
659 /COM,
660 /COM, (A's 141 - 145 = down 1)
661 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
662 /COM, (A's 146 - 150 = down 2)
663 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
664 /COM, (A's 151 - 155 = down 3)
665 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
666 /COM,
667 /COM, (A's 156 - 160 = down 1)
668 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
669 /COM,
670 /COM, *****
671 /COM, Create mesh in tube guides, thermal shunts
672 /COM, Set mesh size for gaps.....
673 ESIZE,,2,
674 LSEL,S,LINE,, 35, 57,1,
675 LSEL,A,LINE,,125,136,1,
676 LSEL,A,LINE,, 13, 15,2,
677 LSEL,A,LINE,, 17, 18,1,
678 LSEL,A,LINE,, 20, 22,2,
679 LSEL,A,LINE,, 23, 25,2,
680 LSEL,A,LINE,, 27, 28,1,
681 LSEL,A,LINE,, 30, 32,2,
682 LESIZE,ALL,,, 2,
683 LSEL,S,LINE,, 70, 74,1,
684 LSEL,A,LINE,, 91, 94,1,
685 LSEL,A,LINE,,107,110,1,
686 LSEL,A,LINE,,123,124,1,
687 LESIZE,ALL,,, 3,
688 LSEL,S,LINE,, 14, 21,7,
689 LSEL,A,LINE,, 24, 31,7,
690 LSEL,A,LINE,, 58, 69,1,
691 LSEL,A,LINE,, 75, 90,1,
692 LSEL,A,LINE,, 95,106,1,
693 LSEL,A,LINE,,111,122,1,
694 LSEL,A,LINE,,137,140,1,
695 LESIZE,ALL,,, 8,
696 LSEL,S,LINE,, 16, 19,3,
697 LSEL,A,LINE,, 26, 29,3,
698 LESIZE,ALL,,, 16,
699 /COM, MESH CORNER GUIDES
700 ESHAPE,2,
701 ESIZE,,1,
702 MAT,2,
703 TYPE,1,
704 AMESH,27,42,1,
705 /COM, MESH THERMAL SHUNTS
706 ESHAPE,2,
707 ESIZE,,1,
708 MAT,13,
709 TYPE,1,
710 AMESH, 5,26,1,
711 NUMMRG,NODE,
712 NUMMRG,KP,
713 /COM, *****
714 /COM, Create mesh in UCF inner shell
715 /COM, (L's 105,108 ????)
716 LSEL,S,LINE,,13,22,1,
717 LCCAT,ALL,
718 LSEL,S,LINE,,23,32,1,

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719 LCCAT,ALL,
720 LSEL,ALL,
721 LESIZE,8,,,60,
722 LESIZE,9,,,60,
723 LESIZE,12,,, 3,
724 LESIZE,33,,, 3,
725 MAT,2,
726 TYPE,1,
727 AMESH,3,4,1
728 /COM,          Delete concatenated lines
729 /COM,          (L's freed up 105,108 ????)
730 /COM,  LDELE,105,108,1,  LEAVE THEM FOR NOW, WHO CARES
731 /COM,
732 LSEL,S,LINE,,6,7,1,
733 LESIZE,ALL,,,60,
734 LSEL,ALL,
735 LESIZE, 5,,, 3,
736 LESIZE,10,,, 3,
737 LESIZE,11,,, 3,
738 MAT,15,
739 TYPE,1,
740 AMESH,1,2,1,
741 NUMMRG,NODE,
742 NUMMRG,KP,
743 /COM, *****
744 /COM,          Create mesh in empty basket spaces
745 ESIZE,0.1,
746 ESHAPE,0,
747 MAT,7,
748 TYPE,1,
749 AMESH,43,50,1,
750 NUMMRG,NODE,
751 NUMMRG,KP,
752 /COM, *****
753 /COM,          Create radiation surface elements
754 /COM,          Basket spaces
755 MAT,2,
756 TYPE,17,
757 LMESH, 14, 16,2,
758 LMESH, 19, 21,2,
759 LMESH, 24, 26,2,
760 LMESH, 29, 31,2,
761 LMESH, 93, 94,1,
762 LMESH, 96,124,2,
763 LMESH,107,109,2,
764 LMESH,123,
765 MAT,1,
766 TYPE,17,
767 LMESH,137,140,1,
768 MAT,13,
769 TYPE,17,
770 LMESH,70,72,2,
771 LMESH,74,
772 LMESH,92,
773 /COM,
774 FINISH
775 /COM, *****
776 /COM,          Create element mesh plots to illustrate model
777 /COM,          View mesh for entire model
778 /RESET
779 /TRIAD,OFF,
780 /NUM, 1,
781 /PNUM,MAT, 1,
782 /TYPE,HIDP,
783 /GLINE,,0,
784 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
785 /TITLE, 44.BWR UCF/Waste Package - 1/2 FEM Model
786 /SHOW,meshfull,grph,1,8,
787 EPLOT
788 ESEL,U,MAT,, 7,

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789 /SHOW,meshgap,grph,1,8,
790 EPLOT
791 /COM,          View mesh for radiation substructure
792 /PNUM,MAT, 0,
793 /PNUM,TYPE, 1,
794 ESEL,S,TYPE,,17,
795 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
796 /SHOW,meshrad,grph,1,8,
797 EPLOT
798 ESEL,ALL,
799 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
800 /COM,          *****
801 /COM,          Generate super-elements
802 /AUX12,
803 ESEL,S,TYPE,,17,
804 NSLE,S,
805 STEF,5.67E-8,
806 GEOM,1,0,
807 VTYPE,0,800,
808 WRITE,spaces,
809 ESEL,ALL,
810 NSEL,ALL,
811 FINISH
812 /PREP7,
813 TYPE,18,
814 SE,spaces,
815 /COM,          Delete radiation edge elements
816 LSEL,S,TYPE,,17,
817 LCLEAR,ALL,
818 LSEL,ALL,
819 FINISH
820 /COM,          *****
821 /COM,          Set solution parameters and apply B.C.'s
822 /COM,
823 /COM,          Solve steady-state for initial conditions
824 /COM,          with WP surface equal to drift ambient
825 /COM,          temperature from repository model.
826 /SOLU
827 ANTYPE,TRAN,NEW,
828 NROPT,AUTO,
829 TRNOPT,FULL,
830 TOFFST,273.15,
831 LSEL,S,LINE,,6,
832 LSEL,A,LINE,,7,
833 NSLL,S,1,
834 D,ALL,TEMP,DFAMBT,
835 LSEL,ALL,
836 NSEL,ALL,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,1e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM,          Solve steady-state for initial conditions
848 /COM,          with WP surface temperatures from repository
849 /COM,          steady-state solution.
850 LSEL,S,LINE,,6,
851 LSEL,A,LINE,,7,
852 NSLL,S,1,
853 DDELE,ALL,TEMP,
854 LSEL,ALL,
855 NSEL,ALL,
856 DK,11,TEMP,(WPTOP(TM_START)),,1,
857 DK,10,TEMP,(WPSID(TM_START)),,1,
858 DK, 9,TEMP,(WPBOT(TM_START)),,1,

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859 ASEL,S,MAT,,14,
860 ESLA,S,
861 BFE,ALL,HGEN,,(FUEL(TM_START)),
862 ASEL,ALL,
863 ESEL,ALL,
864 TIMINT,OFF,
865 TIME,2e-6,
866 AUTOTS,ON,
867 KBC,0,
868 SOLVE
869 /COM, *****
870 /COM, Set time integration parameters
871 TIMINT,ON,
872 AUTOTS,ON,
873 /COM, Time substep ranges from 10 sec to 1/4 loadstep
874 NSUBST,10,40,5,ON
875 /COM, Begin Transient
876 /COM, Apply loads and solve for 0 to .9 years
877 *DO,TM,TM_START,TME0,TM10
878 TIME,TM,
879 ASEL,S,MAT,,14,
880 ESLA,S,
881 BFE,ALL,HGEN,,(FUEL(TM)),
882 ASEL,ALL
883 ESEL,ALL
884 DK,11,TEMP,(WPTOP(TM)),,1,
885 DK,10,TEMP,(WPSID(TM)),,1,
886 DK, 9,TEMP,(WPBOT(TM)),,1,
887 SOLVE
888 *ENDDO
889 /COM, Apply loads and solve for 1 to 9 years
890 *DO,TM,TME1,TME9,TM11
891 TIME,TM,
892 ASEL,S,MAT,,14,
893 ESLA,S,
894 BFE,ALL,HGEN,,(FUEL(TM)),
895 ASEL,ALL
896 ESEL,ALL
897 DK,11,TEMP,(WPTOP(TM)),,1,
898 DK,10,TEMP,(WPSID(TM)),,1,
899 DK, 9,TEMP,(WPBOT(TM)),,1,
900 SOLVE
901 *ENDDO
902 /COM, Apply loads and solve for 10 to 90 years
903 *DO,TM,TME10,TME90,TM110
904 TIME,TM,
905 ASEL,S,MAT,,14,
906 ESLA,S,
907 BFE,ALL,HGEN,,(FUEL(TM)),
908 ASEL,ALL
909 ESEL,ALL
910 DK,11,TEMP,(WPTOP(TM)),,1,
911 DK,10,TEMP,(WPSID(TM)),,1,
912 DK, 9,TEMP,(WPBOT(TM)),,1,
913 SOLVE
914 *ENDDO
915 /COM, Apply loads and solve for 100 to 1000 years
916 *DO,TM,TME100,TME1000,TM1100
917 TIME,TM,
918 ASEL,S,MAT,,14,
919 ESLA,S,
920 BFE,ALL,HGEN,,(FUEL(TM)),
921 ASEL,ALL
922 ESEL,ALL
923 DK,11,TEMP,(WPTOP(TM)),,1,
924 DK,10,TEMP,(WPSID(TM)),,1,
925 DK, 9,TEMP,(WPBOT(TM)),,1,
926 SOLVE
927 *ENDDO
928 FINISH

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929 SAVE,
930 /COM, *****
931 /COM, Create element contour plots of solution results
932 /COM,
933 /COM, Sort through solution results for time of max temp.
934 /POST26,
935 NSOL,2,(NODE((THWLL+SCELL),(-1.0*THWLL-SCELL),0.0)),TEMP,,peakclad,
936 STORE,NEW,
937 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
938 FINISH
939 /POST1,
940 /COM, Create temperature contour plots of WP at peak
941 /RESET
942 /TRIAD,OFF,
943 /NUM,1,
944 /PNUM,MAT,1,
945 /TYPE,HIDP,
946 /GLINE,,-1,
947 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
948 ESEL,U,MAT,,7,
949 SET,NEAR,,,TMTMAX,
950 /TITLE,44 BWR UCF/WP at Time of Peak Temp. (%TMTMAX/3.15576E7% years)
951 /SHOW,solupk,grph,0,8,
952 /CONTOUR,1,128,AUTO,
953 PLNSOL,TEMP,
954 /COM, Create temperature contour plots at 10, 50, and 100 yrs
955 SET,NEAR,,,TME10,
956 /TITLE,44 BWR UCF/WP at 10 years
957 /SHOW,solu10,grph,0,8,
958 /CONTOUR,1,128,USER,
959 PLNSOL,TEMP,
960 SET,NEAR,,,TME50,
961 /TITLE,44 BWR UCF/WP at 50 years
962 /SHOW,solu50,grph,0,8,
963 /CONTOUR,1,128,USER,
964 PLNSOL,TEMP,
965 SET,NEAR,,,TME100,
966 /TITLE,44 BWR UCF/WP at 100 years
967 /SHOW,solu100,grph,0,8,
968 /CONTOUR,1,128,USER,
969 PLNSOL,TEMP,
970 ESEL,ALL,
971 FINISH
972 /COM, *****
973 /COM, Set some needed variable values:
974 /COM,
975 DATM=THWLL+SCELL
976 DAT1=DATM+PITCH
977 DAT2=DATM+(2.0*PITCH)
978 DAT3=DATM+(3.0*PITCH)
979 /COM,
980 /COM, *****
981 /COM, Print time/temperature output at specific locations
982 /COM, Save profile from center to edge
983 /COM,
984 /COM, Variable Legend: A01i000
985 /COM, c = center of assembly
986 /COM, h = halfway between center and tube
987 /COM, s = inside structural stainless tube layer
988 /COM, t = stainless tube cladding
989 /COM, g = tube guide
990 /COM, i = inner barrier of DC
991 /COM, o = outer barrier of DC
992 /COM, ## = ID number of assembly (01 is center)
993 /COM, i = side of assembly toward center of WP
994 /COM, o = side of assembly toward edge of WP
995 /COM, 000 = profile center down
996 /COM, 045 = profile 45 deg down
997 /COM, 090 = profile center side
998 /COM, 135 = profile 45 deg up

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999 /COM, 180 = profile center up
1000 /POST26,
1001 NUMVAR,30,
1002 /COM,
1003 /COM, *****
1004 /COM, *Temperature Profile from center offset to bottom of WP (0 deg.)*
1005 /COM, *****
1006 NSOL, 2, (NODE( DATM, 0.0,0.0)),TEMP,,ts1i000,
1007 NSOL, 3, (NODE( DATM, (0.0-THWLL),0.0)),TEMP,,t01i000,
1008 NSOL, 4, (NODE( DATM, (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
1009 NSOL, 5, (NODE( DATM, (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
1010 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i000,
1011 NSOL, 7, (NODE( DATM, (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
1012 NSOL, 8, (NODE( DATM, (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
1013 NSOL, 9, (NODE( DATM, (0.0-DATM-SCCELL),0.0)),TEMP,,t01o000,
1014 NSOL,10, (NODE( DATM, (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
1015 NSOL,11, (NODE( DATM, (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
1016 NSOL,12, (NODE( DATM, (0.0-DAT1),0.0)),TEMP,,c09i000,
1017 NSOL,13, (NODE( DATM, (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
1018 NSOL,14, (NODE( DATM, (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
1019 NSOL,15, (NODE( DATM, (0.0-DAT1-SCCELL),0.0)),TEMP,,t09o000,
1020 NSOL,16, (NODE( DATM, (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,
1021 NSOL,17, (NODE( DATM, (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1022 NSOL,18, (NODE( DATM, (0.0-DAT2),0.0)),TEMP,,c15i000,
1023 NSOL,19, (NODE( DATM, (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1024 NSOL,20, (NODE( DATM, (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1025 NSOL,21, (NODE( DATM, (0.0-DAT2-SCCELL),0.0)),TEMP,,t15o000,
1026 NSOL,22, (NODE( DATM, (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1027 NSOL,23, (NODE( DATM, (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1028 NSOL,24, (NODE( DATM, (0.0-DAT3),0.0)),TEMP,,c21i000,
1029 NSOL,25, (NODE( DATM, (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1030 NSOL,26, (NODE( DATM, (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1031 NSOL,27, (NODE( DATM, (0.0-DAT3-SCCELL),0.0)),TEMP,,t21o000,
1032 NSOL,28, (NODE( DATM, (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1033 NSOL,29, (NODE( DATM, (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1034 NSOL,30, (NODE( DATM, (0.0-DCRAD),0.0)),TEMP,,o21o000,
1035 PRVAR, 2, 3, 4, 5, 6, 7,
1036 PRVAR, 8, 9,10,11,12,13,
1037 PRVAR,14,15,16,17,18,19,
1038 PRVAR,20,21,22,23,24,25,
1039 PRVAR,26,27,28,29,30,
1040 /COM,
1041 /COM, *****
1042 /COM, * Temperature Profile from center to lower right (45 deg.) *
1043 /COM, *****
1044 NSOL, 2, (NODE( 0.0, 0.0,0.0)),TEMP,,ts1i045,
1045 NSOL, 3, (NODE( THWLL, (0.0-THWLL),0.0)),TEMP,,t01i045,
1046 NSOL, 4, (NODE( (THWLL+SWALL), (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1047 NSOL, 5, (NODE( (DATM-QCELL), (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1048 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i045,
1049 NSOL, 7, (NODE( (DATM+QCELL), (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1050 NSOL, 8, (NODE( (DATM+HCELL), (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1051 NSOL, 9, (NODE( (DATM+SCCELL), (0.0-DATM-SCCELL),0.0)),TEMP,,t01o045,
1052 NSOL,10, (NODE( (DAT1-HCELL), (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1053 NSOL,11, (NODE( (DAT1-QCELL), (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1054 NSOL,12, (NODE( DAT1, (0.0-DAT1),0.0)),TEMP,,c11i045,
1055 NSOL,13, (NODE( (DAT1+QCELL), (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1056 NSOL,14, (NODE( (DAT1+HCELL), (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1057 NSOL,15, (NODE( (DAT1+SCCELL), (0.0-DAT1-SCCELL),0.0)),TEMP,,t11o045,
1058 NSOL,16, (NODE( (DAT2-HCELL), (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1059 NSOL,17, (NODE( (DAT2-QCELL), (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1060 NSOL,18, (NODE( DAT2, (0.0-DAT2),0.0)),TEMP,,c19i045,
1061 NSOL,19, (NODE( (DAT2+QCELL), (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1062 NSOL,20, (NODE( (DAT2+HCELL), (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1063 NSOL,21, (NODE( (DAT2+SCCELL), (0.0-DAT2-SCCELL),0.0)),TEMP,,t19o045,
1064 NSOL,22, (NODE( DM45, (-1.0*DM45),0.0)),TEMP,,i19i045,
1065 NSOL,23, (NODE( DO45, (-1.0*DO45),0.0)),TEMP,,o19o045,
1066 /COM, Add centers of assemblies 13 and 17
1067 NSOL,24, (NODE( DAT2, (-1.0*DAT1),0.0)),TEMP,,c13i045,
1068 NSOL,25, (NODE( DAT1, (-1.0*DAT2),0.0)),TEMP,,c17i045,

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1069 PRVAR, 2, 3, 4, 5, 6, 7,
1070 PRVAR, 8, 9, 10, 11, 12, 13,
1071 PRVAR, 14, 15, 16, 17, 18, 19,
1072 PRVAR, 20, 21, 22, 23, 24, 25,
1073 /COM,
1074 /COM, *****
1075 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1076 /COM, *****
1077 NSOL, 2, (NODE( 0.0, (0.0-DATM), 0.0)), TEMP, ,ts2i180,
1078 NSOL, 3, (NODE( (THWLL), (0.0-DATM), 0.0)), TEMP, ,t02i180,
1079 NSOL, 4, (NODE( (THWLL+SWALL), (0.0-DATM), 0.0)), TEMP, ,s02i180,
1080 NSOL, 5, (NODE( (DATM-QCELL), (0.0-DATM), 0.0)), TEMP, ,h02i180,
1081 NSOL, 6, (NODE( (DATM), (0.0-DATM), 0.0)), TEMP, ,c02i180,
1082 NSOL, 7, (NODE( (DATM+QCELL), (0.0-DATM), 0.0)), TEMP, ,h02o180,
1083 NSOL, 8, (NODE( (DATM+HCELL), (0.0-DATM), 0.0)), TEMP, ,s02o180,
1084 NSOL, 9, (NODE( (DATM+SCELL), (0.0-DATM), 0.0)), TEMP, ,t02o180,
1085 NSOL, 10, (NODE( (DAT1-HCELL), (0.0-DATM), 0.0)), TEMP, ,s10i180,
1086 NSOL, 11, (NODE( (DAT1-QCELL), (0.0-DATM), 0.0)), TEMP, ,h10i180,
1087 NSOL, 12, (NODE( (DAT1), (0.0-DATM), 0.0)), TEMP, ,c10i180,
1088 NSOL, 13, (NODE( (DAT1+QCELL), (0.0-DATM), 0.0)), TEMP, ,h10o180,
1089 NSOL, 14, (NODE( (DAT1+HCELL), (0.0-DATM), 0.0)), TEMP, ,s10o180,
1090 NSOL, 15, (NODE( (DAT1+SCELL), (0.0-DATM), 0.0)), TEMP, ,t10o180,
1091 NSOL, 16, (NODE( (DAT2-HCELL), (0.0-DATM), 0.0)), TEMP, ,s16i180,
1092 NSOL, 17, (NODE( (DAT2-QCELL), (0.0-DATM), 0.0)), TEMP, ,h16i180,
1093 NSOL, 18, (NODE( (DAT2), (0.0-DATM), 0.0)), TEMP, ,c16i180,
1094 NSOL, 19, (NODE( (DAT2+QCELL), (0.0-DATM), 0.0)), TEMP, ,h16o180,
1095 NSOL, 20, (NODE( (DAT2+HCELL), (0.0-DATM), 0.0)), TEMP, ,s16o180,
1096 NSOL, 21, (NODE( (DAT2+SCELL), (0.0-DATM), 0.0)), TEMP, ,t16o180,
1097 NSOL, 22, (NODE( (DAT3-HCELL), (0.0-DATM), 0.0)), TEMP, ,s22i180,
1098 NSOL, 23, (NODE( (DAT3-QCELL), (0.0-DATM), 0.0)), TEMP, ,h22i180,
1099 NSOL, 24, (NODE( (DAT3), (0.0-DATM), 0.0)), TEMP, ,c22i180,
1100 NSOL, 25, (NODE( (DAT3+QCELL), (0.0-DATM), 0.0)), TEMP, ,h22o180,
1101 NSOL, 26, (NODE( (DAT3+HCELL), (0.0-DATM), 0.0)), TEMP, ,s22o180,
1102 NSOL, 27, (NODE( (DAT3+SCELL), (0.0-DATM), 0.0)), TEMP, ,t22o180,
1103 NSOL, 28, (NODE( (DCRAD-OWALL-IWALL), (0.0-DATM), 0.0)), TEMP, ,i22i180,
1104 NSOL, 29, (NODE( (DCRAD-OWALL), (0.0-DATM), 0.0)), TEMP, ,i22o180,
1105 NSOL, 30, (NODE( (DCRAD), (0.0-DATM), 0.0)), TEMP, ,o22o180,
1106 PRVAR, 2, 3, 4, 5, 6, 7,
1107 PRVAR, 8, 9, 10, 11, 12, 13,
1108 PRVAR, 14, 15, 16, 17, 18, 19,
1109 PRVAR, 20, 21, 22, 23, 24, 25,
1110 PRVAR, 26, 27, 28, 29, 30,
1111 /COM, *****
1112 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1113 /COM, *****
1114 NSOL, 2, (NODE( 0.0, DATM, 0.0)), TEMP, ,ts2i180,
1115 NSOL, 3, (NODE( (THWLL), DATM, 0.0)), TEMP, ,t02i180,
1116 NSOL, 4, (NODE( (THWLL+SWALL), DATM, 0.0)), TEMP, ,s02i180,
1117 NSOL, 5, (NODE( (DATM-QCELL), DATM, 0.0)), TEMP, ,h02i180,
1118 NSOL, 6, (NODE( (DATM), DATM, 0.0)), TEMP, ,c02i180,
1119 NSOL, 7, (NODE( (DATM+QCELL), DATM, 0.0)), TEMP, ,h02o180,
1120 NSOL, 8, (NODE( (DATM+HCELL), DATM, 0.0)), TEMP, ,s02o180,
1121 NSOL, 9, (NODE( (DATM+SCELL), DATM, 0.0)), TEMP, ,t02o180,
1122 NSOL, 10, (NODE( (DAT1-HCELL), DATM, 0.0)), TEMP, ,s10i180,
1123 NSOL, 11, (NODE( (DAT1-QCELL), DATM, 0.0)), TEMP, ,h10i180,
1124 NSOL, 12, (NODE( (DAT1), DATM, 0.0)), TEMP, ,c10i180,
1125 NSOL, 13, (NODE( (DAT1+QCELL), DATM, 0.0)), TEMP, ,h10o180,
1126 NSOL, 14, (NODE( (DAT1+HCELL), DATM, 0.0)), TEMP, ,s10o180,
1127 NSOL, 15, (NODE( (DAT1+SCELL), DATM, 0.0)), TEMP, ,t10o180,
1128 NSOL, 16, (NODE( (DAT2-HCELL), DATM, 0.0)), TEMP, ,s16i180,
1129 NSOL, 17, (NODE( (DAT2-QCELL), DATM, 0.0)), TEMP, ,h16i180,
1130 NSOL, 18, (NODE( (DAT2), DATM, 0.0)), TEMP, ,c16i180,
1131 NSOL, 19, (NODE( (DAT2+QCELL), DATM, 0.0)), TEMP, ,h16o180,
1132 NSOL, 20, (NODE( (DAT2+HCELL), DATM, 0.0)), TEMP, ,s16o180,
1133 NSOL, 21, (NODE( (DAT2+SCELL), DATM, 0.0)), TEMP, ,t16o180,
1134 NSOL, 22, (NODE( (DAT3-HCELL), DATM, 0.0)), TEMP, ,s22i180,
1135 NSOL, 23, (NODE( (DAT3-QCELL), DATM, 0.0)), TEMP, ,h22i180,
1136 NSOL, 24, (NODE( (DAT3), DATM, 0.0)), TEMP, ,c22i180,
1137 NSOL, 25, (NODE( (DAT3+QCELL), DATM, 0.0)), TEMP, ,h22o180,
1138 NSOL, 26, (NODE( (DAT3+HCELL), DATM, 0.0)), TEMP, ,s22o180,

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1139 NSOL,27,(NODE(      (DAT3+SCCELL),      DATM,0.0)),TEMP,,t22o180,
1140 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1141 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1142 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1143 PRVAR, 2, 3, 4, 5, 6, 7,
1144 PRVAR, 8, 9,10,11,12,13,
1145 PRVAR,14,15,16,17,18,19,
1146 PRVAR,20,21,22,23,24,25,
1147 PRVAR,26,27,28,29,30,
1148 /COM,
1149 /COM, *****
1150 /COM, * Temperature Profile from center to upper right (135 deg.) *
1151 /COM, *****
1152 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1153 NSOL, 3,(NODE(      THWLL,      (THWLL),0.0)),TEMP,,t02i135,
1154 NSOL, 4,(NODE(      (THWLL+SWALL),      (THWLL+SWALL),0.0)),TEMP,,s02i135,
1155 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1156 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1157 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1158 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1159 NSOL, 9,(NODE(      (DATM+SCCELL),      (DATM+SCCELL),0.0)),TEMP,,t02o135,
1160 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,
1161 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1162 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1163 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1164 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1165 NSOL,15,(NODE(      (DAT1+SCCELL),      (DAT1+SCCELL),0.0)),TEMP,,t12o135,
1166 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1167 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1168 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1169 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1170 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1171 NSOL,21,(NODE(      (DAT2+SCCELL),      (DAT2+SCCELL),0.0)),TEMP,,t20o135,
1172 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1173 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1174 /COM,      Add centers of assemblies 13 and 17
1175 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1176 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1177 PRVAR, 2, 3, 4, 5, 6, 7,
1178 PRVAR, 8, 9,10,11,12,13,
1179 PRVAR,14,15,16,17,18,19,
1180 PRVAR,20,21,22,23,24,25,
1181 /COM,
1182 /COM, *****
1183 /COM, *Temperature Profile from center offset to top of WP (180 deg.)*
1184 /COM, *****
1185 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1186 NSOL, 3,(NODE(      DATM,      (THWLL),0.0)),TEMP,,t02i180,
1187 NSOL, 4,(NODE(      DATM,      (THWLL+SWALL),0.0)),TEMP,,s02i180,
1188 NSOL, 5,(NODE(      DATM,      (DATM-QCELL),0.0)),TEMP,,h02i180,
1189 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1190 NSOL, 7,(NODE(      DATM,      (DATM+QCELL),0.0)),TEMP,,h02o180,
1191 NSOL, 8,(NODE(      DATM,      (DATM+HCELL),0.0)),TEMP,,s02o180,
1192 NSOL, 9,(NODE(      DATM,      (DATM+SCCELL),0.0)),TEMP,,t02o180,
1193 NSOL,10,(NODE(      DATM,      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1194 NSOL,11,(NODE(      DATM,      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1195 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1196 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1197 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1198 NSOL,15,(NODE(      DATM,      (DAT1+SCCELL),0.0)),TEMP,,t10o180,
1199 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1200 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1201 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1202 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1203 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1204 NSOL,21,(NODE(      DATM,      (DAT2+SCCELL),0.0)),TEMP,,t16o180,
1205 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1206 NSOL,23,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22i180,
1207 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1208 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,

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```

1209 NSOL,26,(NODE(      DATM,      (DAT3+HCELL),0.0)),TEMP,,s22o180,
1210 NSOL,27,(NODE(      DATM,      (DAT3+SCELL),0.0)),TEMP,,t22o180,
1211 NSOL,28,(NODE(      DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1212 NSOL,29,(NODE(      DATM,      (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1213 NSOL,30,(NODE(      DATM,      (DCRAD),0.0)),TEMP,,o22o180,
1214 PRVAR, 2, 3, 4, 5, 6, 7,
1215 PRVAR, 8, 9,10,11,12,13,
1216 PRVAR,14,15,16,17,18,19,
1217 PRVAR,20,21,22,23,24,25,
1218 PRVAR,26,27,28,29,30,
1219 FINISH
1220 /COM, *****
1221 /COM,      End of batch input file
1222 /COM, *****
1223 /EXIT,
1224 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

```

/INPUT FILE= /ansys50a/docu/start.ans LINE=      0
*****
ANSYS STARTUP FILE start.ans
*****

```

```

ABBREVIATION= K1      /pnum,kp ,1,
ABBREVIATION= K0      /pnum,kp ,0,
ABBREVIATION= L1      /pnum,line,1,
ABBREVIATION= L0      /pnum,line,0,
ABBREVIATION= A1      /pnum,area,1,
ABBREVIATION= A0      /pnum,area,0,
ABBREVIATION= V1      /pnum,volu,1,
ABBREVIATION= V0      /pnum,volu,0,
ABBREVIATION= N1      /pnum,node,1,
ABBREVIATION= N0      /pnum,node,0,
ABBREVIATION= E1      /pnum,elem,1,
ABBREVIATION= E0      /pnum,elem,0,
ABBREVIATION= M1      /pnum,mat ,1,
ABBREVIATION= M0      /pnum,mat ,0,
ABBREVIATION= R1      /pnum,real,1,
ABBREVIATION= R0      /pnum,real,0,
ABBREVIATION= T1      /pnum,type,1,
ABBREVIATION= T0      /pnum,type,0,
ABBREVIATION= C1      /number,1,
ABBREVIATION= C0      /number,0,
ABBREVIATION= INP     /input,,inp,
ABBREVIATION= X3D     /show,3d,
ABBREVIATION= X11     /show,x11,

```

ABBREVIATION= VEC /show,,,1,
 ABBREVIATION= RAS /show,,,0,
 ABBREVIATION= ON /menu,on,
 ABBREVIATION= OFF /menu,off,
 ABBREVIATION= NVP /config,nvpag,512,
 ABBREVIATION= QUIT /exit,nosav,
 XYZ TRIAD DISPLAY SET TO CFF

VIEW CONE ANGLE FOR WINDOW 1 25.00

 END start.ans

To start ANSYS menu:

type: x3d for console
 x11 for X-term

type: on

 ANSYS REVISION 5.0A 6/16/1995
 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz

*
 * File name: ucf44j.inp *
 * 44 BWR UCF with Low T.L. Disposal Container *
 * Helium Fill Gas *
 *
 * Material Property file: props01.dat *
 *
 * SNF Conductivity file: pwr15e.parm (Check for Changes) *
 * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
 *
 * SNF Heat Loads file: bwr1049.dat *
 * SNF Type: 10 years old, 49000 MWD/MTU *
 *
 * Surface Temp. file: c21j5a.parm *
 * 25 MTU/acre (6.18 kgU/m²) AML (Low Thermal Loading) *
 * 5.0 m Diameter Drift with Concrete Invert *
 * Drift spacing = 67.5 m *
 * WP c/c spacing = 21.554 m *
 *

 Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512
 Work space must also be increased (-m 64)

TITLE=
 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED
 LENGTH = METERS(M)
 MASS = KILOGRAMS(KG)
 TIME = SECONDS(SEC)
 TEMPERATURE = CENTIGRADE
 CURRENT = AMPS

Read in average effective conductivities from SNF model

*** NOTE ***

CP= .610 TIME= 15:14:09

Restore ANSYS parameters from file= pwr15e.parm.

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

*** NOTE *** CP= .840 TIME= 15:14:09

Restore ANSYS parameters from file= c21j5a.parm.

/INPUT FILE= c21j5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

Define UCF/waste package parameters

(UCF dimensions converted from inches/cm/mm to meters were requi

MIRAD = inner radius of UCF He Backfill shell (m) (NOT

MWALL = UCF He Backfill shell thickness (m) (NOT

DCRAD = disposal container outer radius (m)

OWALL = outer barrier thickness (m)

IWALL = inner barrier thickness (m)

DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)

GCORS = corner guide short side width (m)

GWALL = basket guide thickness (m)

GLEN1 = side guide 1/3 width (m) (NOT USED)

GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)

SWALL = stainless tube thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length

PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0

MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .7630000

PARAMETER OWALL = .5000000E-01

PARAMETER IWALL = .2000000E-01

PARAMETER DCIRD = .6930000

PARAMETER GCORL = .3200000

PARAMETER GCORS = .1816000

PARAMETER GWALL = .9500000E-02

GLEN1=9.6170*2.54/100.0

GLENT=28.866*2.54/100.0

PARAMETER HCELL = .7650000E-01

PARAMETER SWALL = .3500000E-02

PARAMETER TWALL = .2000000E-01

PARAMETER THWLL = .1000000E-01

PARAMETER ACTVL = 3.810000

PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)

FUEL = volumetric heat production (W/m³) f(yrs)

FVOLUME = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)

QCELL = 1/4 of basket cell opening (m)

SCCELL = 1/2 of basket cell opening+SS wall(m)

ACELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c

GX## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)

MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)

DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.

DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVOLUME = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCCELL = .8000000E-01
ACELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)

MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5395225

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
 TM_START = start time (sec)
 TMI* = time increment for solution (sec)
 TME* = start and stop for time do-loops (sec)
 TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760
 PARAMETER TM10 = 3155760.
 PARAMETER TM11 = .3155760E+08
 PARAMETER TM110 = .3155760E+09
 PARAMETER TM1100 = .3155760E+10
 PARAMETER TM11000 = .3155760E+11
 PARAMETER TME0 = .2840187E+08
 PARAMETER TME1 = .3155763E+08
 PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:10 JUN 18, 1995 CP= 1.780
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP

THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **
** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density: DENS (kg/m^3) **
** Emissivity EMIS **
** Conductivity: KXX (W/m/K) **
** Specific Heat: C (J/kg/K) **

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 NUM. POINTS= 1
SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1
SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1
SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1
SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1
SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1
SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 21.11000 37.78000 65.56000
 93.33000 121.1100 148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 176.6700 204.4400 232.2200
 260.0000 287.7800 315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 343.3300 371.1100 398.8900
 426.6700 454.4400 482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 510.0000 537.7800 565.5600
 593.3300 621.1100 648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 676.6700 704.4400 732.2200
 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6
 SLOC= 1 13.33000 13.67000 14.19000 14.54000
 15.06000 15.58000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12
 SLOC= 7 15.92000 16.44000 16.96000 17.31000
 17.83000 18.17000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18
 SLOC= 13 18.52000 19.04000 19.38000 19.90000
 20.25000 20.77000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24
 SLOC= 19 21.11000 21.46000 21.98000 22.33000
 22.67000 23.02000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30
 SLOC= 25 23.54000 23.88000 24.23000 24.58000
 24.92000 25.27000

PROPERTY TABLE C MAT= 1 NUM. POINTS= 6
 SLOC= 1 481.6800 486.9200 498.0900 499.3800
 509.9800 520.2900

PROPERTY TABLE C MAT= 1 NUM. POINTS= 12
 SLOC= 7 521.0700 527.3800 536.9200 537.3400
 543.0200 543.3100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 18
 SLOC= 13 546.9100 552.1400 552.2600 557.2200
 557.2500 565.1100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 24
 SLOC= 19 565.0100 564.9100 572.3500 572.1400
 574.9200 574.6800

PROPERTY TABLE C MAT= 1 NUM. POINTS= 30
 SLOC= 25 581.6400 581.3000 583.8600 586.3600
 585.9600 588.3900

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6
 SLOC= 1 40.84000 41.36000 41.88000 42.23000
 42.23000 42.23000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12

SLOC= 7	42.06000	41.88000	41.36000	41.02000
	40.50000	39.98000		

PROPERTY TABLE KXX	MAT= 3	NUM. POINTS= 18		
SLOC= 13	39.29000	38.77000	38.08000	37.56000
	36.69000	36.17000		

PROPERTY TABLE KXX	MAT= 3	NUM. POINTS= 24		
SLOC= 19	35.48000	34.61000	33.92000	33.23000
	32.36000	31.50000		

PROPERTY TABLE KXX	MAT= 3	NUM. POINTS= 30		
SLOC= 25	30.29000	28.90000	27.35000	26.48000
	26.13000	26.13000		

PROPERTY TABLE C	MAT= 3	NUM. POINTS= 6		
SLOC= 1	428.7200	444.9500	460.9400	476.8700
	486.0800	495.6600		

PROPERTY TABLE C	MAT= 3	NUM. POINTS= 12		
SLOC= 7	506.0900	517.0700	525.6400	536.9900
	543.6300	550.6200		

PROPERTY TABLE C	MAT= 3	NUM. POINTS= 18		
SLOC= 13	562.2100	577.3200	589.1000	600.5700
	611.3500	629.0900		

PROPERTY TABLE C	MAT= 3	NUM. POINTS= 24		
SLOC= 19	645.3200	665.1200	682.0700	694.5200
	724.0700	761.9500		

PROPERTY TABLE C	MAT= 3	NUM. POINTS= 30		
SLOC= 25	806.3100	888.6000	1095.040	1638.780
	808.6800	736.9000		

Define K for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE	NUM. TEMPS= 6 ***
SLOC= 1	93.33000 121.1100 148.8900
	176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE	NUM. TEMPS= 12 ***
SLOC= 7	260.0000 287.7800 315.5600
	343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE	NUM. TEMPS= 18 ***
SLOC= 13	426.6700 454.4400 482.2200
	510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE	NUM. TEMPS= 24 ***
SLOC= 19	593.3300 621.1100 648.8900
	676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE	NUM. TEMPS= 27 ***
SLOC= 25	760.0000 787.7800 815.5600

PROPERTY TABLE KXX	MAT= 2	NUM. POINTS= 6		
SLOC= 1	12.29000	12.63000	13.15000	13.67000
	14.02000	14.54000		

PROPERTY TABLE KXX	MAT= 2	NUM. POINTS= 12		
SLOC= 7	14.88000	15.40000	15.75000	16.10000
	16.61000	16.96000		

PROPERTY TABLE KXX	MAT= 2	NUM. POINTS= 18		
SLOC= 13	17.31000	17.65000	18.00000	18.52000
	18.86000	19.21000		

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
 SLOC= 1 460.6900 477.4200 501.0200 504.6500
 498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
 SLOC= 7 536.8800 559.8500 576.8300 576.2100
 581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
 SLOC= 13 619.5800 636.7600 654.2000 678.2500
 696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 .0000000E+00 10.00000 20.00000
 30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 60.00000 70.00000 80.00000
 90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 120.0000 130.0000 140.0000
 150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 180.0000 190.0000 200.0000
 210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 240.0000 250.0000 260.0000
 270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
 SLOC= 31 300.0000 310.0000 320.0000
 330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
 SLOC= 37 360.0000 370.0000 380.0000
 390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
 SLOC= 43 420.0000 430.0000 440.0000

450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
SLOC= 1 8.720000 8.540000 8.360000 8.190000
8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
SLOC= 7 7.720000 7.580000 7.440000 7.310000
7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
SLOC= 13 6.930000 6.820000 6.700000 6.600000
6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
SLOC= 19 6.290000 6.190000 6.100000 6.010000
5.920000 5.840000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 30
SLOC= 25 5.760000 5.680000 5.600000 5.520000
5.450000 5.380000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 36
SLOC= 31 5.310000 5.240000 5.180000 5.110000
5.050000 4.990000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 42
SLOC= 37 4.930000 4.870000 4.810000 4.760000
4.700000 4.650000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 48
SLOC= 43 4.600000 4.550000 4.500000 4.450000
4.400000 4.350000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 50
SLOC= 48 4.310000 4.270000 4.220000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 6
SLOC= 1 12.29000 12.44000 12.58000 12.72000
12.87000 13.01000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 12
SLOC= 7 13.15000 13.28000 13.42000 13.55000
13.69000 13.82000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 18
SLOC= 13 13.95000 14.08000 14.21000 14.34000
14.46000 14.59000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 24
SLOC= 19 14.72000 14.84000 14.96000 15.09000
15.21000 15.33000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 30
SLOC= 25 15.45000 15.57000 15.69000 15.81000
15.93000 16.05000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 36
SLOC= 31 16.17000 16.29000 16.40000 16.52000
16.64000 16.76000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 42
SLOC= 37 16.88000 16.99000 17.11000 17.23000
17.35000 17.46000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 48

SLOC= 43 17.58000 17.70000 17.82000 17.94000
18.06000 18.18000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 50
SLOC= 48 18.30000 18.42000 18.54000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 6
SLOC= 1 1.940000 1.940000 1.940000 1.940000
1.940000 1.940000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 12
SLOC= 7 1.940000 1.950000 1.950000 1.950000
1.950000 1.950000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 18
SLOC= 13 1.950000 1.950000 1.960000 1.960000
1.960000 1.960000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 24
SLOC= 19 1.960000 1.970000 1.970000 1.970000
1.970000 1.980000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
SLOC= 25 1.980000 1.980000 1.980000 1.990000
1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
SLOC= 31 2.000000 2.000000 2.000000 2.010000
2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
SLOC= 37 2.020000 2.020000 2.020000 2.030000
2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
SLOC= 43 2.040000 2.040000 2.040000 2.050000
2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -13.15000 6.850000 26.85000
76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 226.8500 276.8500 326.8500
376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
SLOC= 1 .1875000 .1750000 .1625000 .1422000
.1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
.6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE DXX MAT= 7 NUM. POINTS= 6
SLOC= 1 .1370000 .1450000 .1520000 .1700000

	.1870000	.2040000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 12		
SLOC= 7	.2200000	.2360000	.2520000	.2640000
	.2780000	.2910000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 15		
SLOC= 13	.3040000	.3300000	.3540000	
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 6		
SLOC= 1	1.348000	1.254700	1.161400	.9950000
	.8711000	.7740000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 12		
SLOC= 7	.6964000	.6329000	.5804000	.5356000
	.4975000	.4643000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 15		
SLOC= 13	.4354000	.3868000	.3482000	
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2500000E-01	.2600000E-01	.3000000E-01
	.3400000E-01	.3700000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 12		
SLOC= 7	.4100000E-01	.4400000E-01	.4700000E-01	.5000000E-01
	.5200000E-01	.5500000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 15		
SLOC= 13	.5700000E-01	.6200000E-01	.6700000E-01	
PROPERTY TABLE C MAT=	8	NUM. POINTS= 6		
SLOC= 1	1006.200	1006.600	1007.000	1009.000
	1014.000	1021.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 12		
SLOC= 7	1030.000	1040.000	1051.000	1063.000
	1075.000	1087.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 15		
SLOC= 13	1099.000	1121.000	1141.000	
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 6		
SLOC= 1	1.303700	1.213500	1.123300	.9625000
	.8425000	.7485000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 12		
SLOC= 7	.6739000	.6124000	.5615000	.5214000
	.4812000	.4512000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 15		
SLOC= 13	.4211000	.3743000	.3368000	
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2400000E-01	.2600000E-01	.2900000E-01
	.3300000E-01	.3600000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 12		
SLOC= 7	.3900000E-01	.4200000E-01	.4500000E-01	.4700000E-01
	.5000000E-01	.5200000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 15		
SLOC= 13	.5500000E-01	.6000000E-01	.6500000E-01	
PROPERTY TABLE C MAT=	9	NUM. POINTS= 6		
SLOC= 1	1041.800	1041.400	1041.000	1042.000
	1045.000	1050.000		
PROPERTY TABLE C MAT=	9	NUM. POINTS= 12		
SLOC= 7	1056.000	1065.000	1075.000	1086.500

1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
.2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
.3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

Define K and C for material 12

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500
326.8500 526.8500 726.8500

PROPERTY TABLE KXX MAT= 12 NUM. POINTS= 6
SLOC= 1 413.0000 401.0000 393.0000 379.0000
366.0000 352.0000

PROPERTY TABLE C MAT= 12 NUM. POINTS= 6
SLOC= 1 356.0000 385.0000 397.0000 417.0000
433.0000 451.0000

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***
SLOC= 1 23.00000 50.00000 100.0000
150.0000 200.0000

PROPERTY TABLE KXX MAT= 13 NUM. POINTS= 5
SLOC= 1 182.5600 190.1700 199.2200 202.9100
203.7200

PROPERTY TABLE C MAT= 13 NUM. POINTS= 5
SLOC= 1 868.0000 903.0000 946.0000 976.0000
998.0000

** End of Material Property List **

Read in single assembly heat loads
Calculate the volumetric heat generation
(Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

** History of SNF Assembly Heat Generation Rates **

** Output of PHIA, SCSI: B00000000-01717-1200-3000X Rev.00B **

** **

** Executable File Name: PHIA00B.EXE **

** Output File Name: bwr1049.dat **

** Execution Date: 03/07/95 **

** Start Age (years): 10.0 **

** Decay Period (years): 10000 **

** Enrichment (percent): 3.74 **

** Burnup (MWd/MTU): 49000 **

** Assembly Type: BWR **

** SNF U Mass. (MTU/assy): 0.200 **

** **

** ASSY(#,1) is the SNF assembly heat in Watts.

**

** ASSY(#,0) is the time post emplacement in years.

**

PARAMETER ASSY(1,1) =	409.4200 408.7300	409.2500 408.5500	409.0700	408.9000
PARAMETER ASSY(7,1) =	408.3800 407.6800	408.2000 406.8200	408.0300	407.8600
PARAMETER ASSY(13,1) =	405.9700 402.6100	405.1200 401.7900	404.2800	403.4400
PARAMETER ASSY(19,1) =	400.9700 397.7400	400.1500 396.9500	399.3400	398.5400
PARAMETER ASSY(25,1) =	396.1600 393.0600	395.3800 386.0700	394.6000	393.8300
PARAMETER ASSY(31,1) =	379.4900 357.2900	373.4300 352.6900	367.7000	362.3600
PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000

PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000 700.0000	550.0000 750.0000	600.0000	650.0000
PARAMETER ASSY(79,0) =	800.0000 1000.000	850.0000 1500.000	900.0000	950.0000
PARAMETER ASSY(85,0) =	2000.000 4000.000	2500.000 4500.000	3000.000	3500.000
PARAMETER ASSY(91,0) =	5000.000 7000.000	5500.000 7500.000	6000.000	6500.000
PARAMETER ASSY(97,0) =	8000.000 10000.00	8500.000	9000.000	9500.000

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08

FACTOR ON FIRST VECTOR PARAMETER = 1.0000

FACTOR ON SECOND VECTOR PARAMETER= 1.0000

FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)

INPUT MATRIX= ASSY(1,0)

INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697

FACTOR ON FIRST VECTOR PARAMETER = 1.0000

FACTOR ON SECOND VECTOR PARAMETER= 1.0000

FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN

FUEL(1) = COPY ASSY(1)

SCALE FACTORS RESULT= 15.697 INPUT= 1.0000

VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity

Density: DENS (kg/m³)

Conductivity: KXX (W/m/K)

Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
SLOC= 1 274.0000
Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Define new material 15 for low thermal loading
outer barrier of 70/30 Copper Nickel (C71500)
Density: DENS (kg/m³)
Conductivity: KXX (W/m/K)
Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00
Density (lb/in³ converted to kg/m³)

PROPERTY TABLE DENS MAT= 15 NUM. POINTS= 1
SLOC= 1 8940.640
Specific Heat (Btu/lb/F converted to J/kg/K)

PROPERTY TABLE C MAT= 15 NUM. POINTS= 1
SLOC= 1 376.7898
Conductivity (Btu/hr/ft/F converted to W/m/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 1 20.00000 100.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 4 ***
SLOC= 3 200.0000 300.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 5 400.0000 500.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 8 ***
SLOC= 7 600.0000 700.0000

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 2
SLOC= 1 29.42190 29.24883

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 4
SLOC= 3 34.09479 38.59461

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 6
SLOC= 5 43.09443 48.11346

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 8
SLOC= 7 53.13249 58.15152

Construct geometry for Disposal Container

Define center and axis keypoints for waste package
Also, create placeholder keypoints and lines
(K's 1,2,3,4,5,6,7,8)
(L's 1,2,3,4)

KEYPOINT 1 X,Y,Z= .000000E+00 .000000E+00 .000000E+00 IN CSYS= 0
KEYPOINT 2 X,Y,Z= .000000E+00 .000000E+00 1.00000 IN CSYS= 0
KEYPOINT 3 X,Y,Z= .000000E+00 .000000E+00 1.30000 IN CSYS= 0
KEYPOINT 4 X,Y,Z= .000000E+00 .000000E+00 1.40000 IN CSYS= 0
KEYPOINT 5 X,Y,Z= .000000E+00 .000000E+00 1.50000 IN CSYS= 0
KEYPOINT 6 X,Y,Z= .000000E+00 .000000E+00 1.60000 IN CSYS= 0
KEYPOINT 7 X,Y,Z= .000000E+00 .000000E+00 1.70000 IN CSYS= 0
KEYPOINT 8 X,Y,Z= .000000E+00 .000000E+00 1.80000 IN CSYS= 0

LINE CONNECTS KEYPOINTS 3 4
LINE NO.= 1 KP1= 3 TAN1= .0000 .0000 -1.0000
KP2= 4 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 4 5
LINE NO.= 2 KP1= 4 TAN1= .0000 .0000 -1.0000
KP2= 5 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 5 6
LINE NO.= 3 KP1= 5 TAN1= .0000 .0000 -1.0000
KP2= 6 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 6 7
LINE NO.= 4 KP1= 6 TAN1= .0000 .0000 -1.0000
KP2= 7 TAN2= .0000 .0000 1.0000

Define disposal container outer radius and material interface
(K's 9,10,11,12,13,14)
(L's 5,6,7,8,9,10,11)
(A's 1,2)

KEYPOINT 9 X,Y,Z= .000000E+00 -.763000 .000000E+00 IN CSYS= 0

KEYPOINT 10 X,Y,Z= .763000 .000000E+00 .000000E+00 IN CSYS= 0

KEYPOINT 11 X,Y,Z= .000000E+00 .763000 .000000E+00 IN CSYS= 0

KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0
 KEYPOINT 20 X,Y,Z= .490025 .490025 .000000E+00 IN CSYS= 0

KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS= 0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS= 0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS= 0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS= 0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS= 0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS= 0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS= 0

LINE CONNECTS KEYPOINTS 14 15
 LINE NO.= 12 KP1= 14 TAN1= .0000 1.0000 .0000
 KP2= 15 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 16 AND 15 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 13 KP1= 16 TAN1= .9999 -.0144 .0000
 KP2= 15 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 17 AND 16 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 14 KP1= 17 TAN1= .9694 -.2453 .0000
 KP2= 16 TAN2= -.9999 .0144 .0000

ARC BETWEEN KEYPOINTS 18 AND 17 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 15 KP1= 18 TAN1= .9659 -.2590 .0000
 KP2= 17 TAN2= -.9694 .2453 .0000

ARC BETWEEN KEYPOINTS 19 AND 18 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 16 KP1= 19 TAN1= .7208 -.6932 .0000
 KP2= 18 TAN2= -.9659 .2590 .0000

ARC BETWEEN KEYPOINTS 20 AND 19 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 17 KP1= 20 TAN1= .7071 -.7071 .0000
 KP2= 19 TAN2= -.7208 .6932 .0000

ARC BETWEEN KEYPOINTS 21 AND 20 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 18 KP1= 21 TAN1= .6932 -.7208 .0000
 KP2= 20 TAN2= -.7071 .7071 .0000

ARC BETWEEN KEYPOINTS 22 AND 21 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 19 KP1= 22 TAN1= .2590 -.9659 .0000
 KP2= 21 TAN2= -.6932 .7208 .0000

ARC BETWEEN KEYPOINTS 23 AND 22 ORIENTATION KEYPOINT= 1

RADIUS= .69300
 LINE NO.= 20 KP1= 23 TAN1= .2453 -.9694 .0000
 KP2= 22 TAN2= -.2590 .9659 .0000

ARC BETWEEN KEYPOINTS 24 AND 23 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 21 KP1= 24 TAN1= .0144 -.9999 .0000
 KP2= 23 TAN2= -.2453 .9694 .0000

ARC BETWEEN KEYPOINTS 25 AND 24 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 22 KP1= 25 TAN1= .0000 -1.0000 .0000
 KP2= 24 TAN2= -.0144 .9999 .0000

ARC BETWEEN KEYPOINTS 26 AND 25 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 23 KP1= 26 TAN1= -.0144 -.9999 .0000
 KP2= 25 TAN2= .0000 1.0000 .0000

ARC BETWEEN KEYPOINTS 27 AND 26 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 24 KP1= 27 TAN1= -.2453 -.9694 .0000
 KP2= 26 TAN2= .0144 .9999 .0000

ARC BETWEEN KEYPOINTS 28 AND 27 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 25 KP1= 28 TAN1= -.2590 -.9659 .0000
 KP2= 27 TAN2= .2453 .9694 .0000

ARC BETWEEN KEYPOINTS 29 AND 28 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 26 KP1= 29 TAN1= -.6932 -.7208 .0000
 KP2= 28 TAN2= .2590 .9659 .0000

ARC BETWEEN KEYPOINTS 30 AND 29 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 27 KP1= 30 TAN1= -.7071 -.7071 .0000
 KP2= 29 TAN2= .6932 .7208 .0000

ARC BETWEEN KEYPOINTS 31 AND 30 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 28 KP1= 31 TAN1= -.7208 -.6932 .0000
 KP2= 30 TAN2= .7071 .7071 .0000

ARC BETWEEN KEYPOINTS 32 AND 31 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 29 KP1= 32 TAN1= -.9659 -.2590 .0000
 KP2= 31 TAN2= .7208 .6932 .0000

ARC BETWEEN KEYPOINTS 33 AND 32 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 30 KP1= 33 TAN1= -.9694 -.2453 .0000
 KP2= 32 TAN2= .9659 .2590 .0000

ARC BETWEEN KEYPOINTS 34 AND 33 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 31 KP1= 34 TAN1= -.9999 -.0144 .0000
 KP2= 33 TAN2= .9694 .2453 .0000

ARC BETWEEN KEYPOINTS 35 AND 34 ORIENTATION KEYPOINT= 1
 RADIUS= .69300
 LINE NO.= 32 KP1= 35 TAN1= -1.0000 .0000 .0000
 KP2= 34 TAN2= .9999 .0144 .0000

LINE CONNECTS KEYPOINTS 12 35
 LINE NO.= 33 KP1= 12 TAN1= .0000 -1.0000 .0000
 KP2= 35 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 25 13
 LINE NO.= 34 KP1= 25 TAN1= -1.0000 .0000 .0000

KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
(51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
(L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
(50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
(67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
(84,85,86,87,88,89,90,91,92)
(A's 5 - 26)

horizontal thermal shunt

KEYPOINT 36 X,Y,Z= .000000E+00 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 37 X,Y,Z= .000000E+00 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 38 X,Y,Z= .100000E-01 -.100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 39 X,Y,Z= .100000E-01 .000000E+00 .000000E+00 IN CSYS= 0

KEYPOINT 40 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS=	0
		vertical thermal shunt					
KEYPOINT	53	X,Y,Z=	.000000E+00	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS=	0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS=	0
		Lines; shunt widths, horizontal then vertical: (35-57)					

LINE CONNECTS KEYPOINTS		36	1				
LINE NO.=	35	KP1=	36	TAN1=	.0000	-1.0000	.0000
		KP2=	1	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		1	37				
LINE NO.=	36	KP1=	1	TAN1=	.0000	-1.0000	.0000
		KP2=	37	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS		38	39				
LINE NO.=	37	KP1=	38	TAN1=	.0000	-1.0000	.0000
		KP2=	39	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	39	40			
LINE NO.= 38 KP1=	39	TAN1=	.0000	-1.0000	.0000
KP2=	40	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	41	42			
LINE NO.= 39 KP1=	41	TAN1=	.0000	-1.0000	.0000
KP2=	42	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	42	43			
LINE NO.= 40 KP1=	42	TAN1=	.0000	-1.0000	.0000
KP2=	43	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	44	45			
LINE NO.= 41 KP1=	44	TAN1=	.0000	-1.0000	.0000
KP2=	45	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	45	46			
LINE NO.= 42 KP1=	45	TAN1=	.0000	-1.0000	.0000
KP2=	46	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	47	48			
LINE NO.= 43 KP1=	47	TAN1=	.0000	-1.0000	.0000
KP2=	48	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	48	49			
LINE NO.= 44 KP1=	48	TAN1=	.0000	-1.0000	.0000
KP2=	49	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	50	51			
LINE NO.= 45 KP1=	50	TAN1=	.0000	-1.0000	.0000
KP2=	51	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	51	52			
LINE NO.= 46 KP1=	51	TAN1=	.0000	-1.0000	.0000
KP2=	52	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	53	54			
LINE NO.= 47 KP1=	53	TAN1=	-1.0000	.0000	.0000
KP2=	54	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	55	56			
LINE NO.= 48 KP1=	55	TAN1=	-1.0000	.0000	.0000
KP2=	56	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	57	58			
LINE NO.= 49 KP1=	57	TAN1=	-1.0000	.0000	.0000
KP2=	58	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	59	60			
LINE NO.= 50 KP1=	59	TAN1=	-1.0000	.0000	.0000
KP2=	60	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	37	40			
LINE NO.= 51 KP1=	37	TAN1=	-1.0000	.0000	.0000
KP2=	40	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	1	39			
LINE NO.= 52 KP1=	1	TAN1=	-1.0000	.0000	.0000
KP2=	39	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	36	38			
LINE NO.= 53 KP1=	36	TAN1=	-1.0000	.0000	.0000
KP2=	38	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	61	62			
LINE NO.= 54 KP1=	61	TAN1=	-1.0000	.0000	.0000
KP2=	62	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	63	64			
LINE NO.= 55 KP1=	63	TAN1=	-1.0000	.0000	.0000

	KP2=	64	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		65	66			
LINE NO.= 56	KP1=	65	TAN1=	-1.0000	.0000	.0000
	KP2=	66	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		67	68			
LINE NO.= 57	KP1=	67	TAN1=	-1.0000	.0000	.0000
	KP2=	68	TAN2=	1.0000	.0000	.0000
Lines; shunt edges, horizontal then vertical: (58-92)						
LINE CONNECTS KEYPOINTS		38	41			
LINE NO.= 58	KP1=	38	TAN1=	-1.0000	.0000	.0000
	KP2=	41	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		39	42			
LINE NO.= 59	KP1=	39	TAN1=	-1.0000	.0000	.0000
	KP2=	42	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		40	43			
LINE NO.= 60	KP1=	40	TAN1=	-1.0000	.0000	.0000
	KP2=	43	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		41	44			
LINE NO.= 61	KP1=	41	TAN1=	-1.0000	.0000	.0000
	KP2=	44	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		42	45			
LINE NO.= 62	KP1=	42	TAN1=	-1.0000	.0000	.0000
	KP2=	45	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		43	46			
LINE NO.= 63	KP1=	43	TAN1=	-1.0000	.0000	.0000
	KP2=	46	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		44	47			
LINE NO.= 64	KP1=	44	TAN1=	-1.0000	.0000	.0000
	KP2=	47	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		45	48			
LINE NO.= 65	KP1=	45	TAN1=	-1.0000	.0000	.0000
	KP2=	48	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		46	49			
LINE NO.= 66	KP1=	46	TAN1=	-1.0000	.0000	.0000
	KP2=	49	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		47	50			
LINE NO.= 67	KP1=	47	TAN1=	-1.0000	.0000	.0000
	KP2=	50	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		48	51			
LINE NO.= 68	KP1=	48	TAN1=	-1.0000	.0000	.0000
	KP2=	51	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		49	52			
LINE NO.= 69	KP1=	49	TAN1=	-1.0000	.0000	.0000
	KP2=	52	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		26	50			
LINE NO.= 70	KP1=	26	TAN1=	1.0000	.0000	.0000
	KP2=	50	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		25	51			
LINE NO.= 71	KP1=	25	TAN1=	1.0000	.0000	.0000
	KP2=	51	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		52	24			
LINE NO.= 72	KP1=	52	TAN1=	-1.0000	.0000	.0000
	KP2=	24	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	15	53			
LINE NO.= 73	KP1= 15	TAN1=	.0000	1.0000	.0000
	KP2= 53	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	16	54			
LINE NO.= 74	KP1= 16	TAN1=	.0000	1.0000	.0000
	KP2= 54	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	53	55			
LINE NO.= 75	KP1= 53	TAN1=	.0000	1.0000	.0000
	KP2= 55	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	54	56			
LINE NO.= 76	KP1= 54	TAN1=	.0000	1.0000	.0000
	KP2= 56	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	55	57			
LINE NO.= 77	KP1= 55	TAN1=	.0000	1.0000	.0000
	KP2= 57	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	56	58			
LINE NO.= 78	KP1= 56	TAN1=	.0000	1.0000	.0000
	KP2= 58	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	57	59			
LINE NO.= 79	KP1= 57	TAN1=	.0000	1.0000	.0000
	KP2= 59	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	58	60			
LINE NO.= 80	KP1= 58	TAN1=	.0000	1.0000	.0000
	KP2= 60	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	59	37			
LINE NO.= 81	KP1= 59	TAN1=	.0000	1.0000	.0000
	KP2= 37	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	60	40			
LINE NO.= 82	KP1= 60	TAN1=	.0000	1.0000	.0000
	KP2= 40	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	36	61			
LINE NO.= 83	KP1= 36	TAN1=	.0000	1.0000	.0000
	KP2= 61	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	38	62			
LINE NO.= 84	KP1= 38	TAN1=	.0000	1.0000	.0000
	KP2= 62	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	61	63			
LINE NO.= 85	KP1= 61	TAN1=	.0000	1.0000	.0000
	KP2= 63	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	62	64			
LINE NO.= 86	KP1= 62	TAN1=	.0000	1.0000	.0000
	KP2= 64	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	63	65			
LINE NO.= 87	KP1= 63	TAN1=	.0000	1.0000	.0000
	KP2= 65	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	64	66			
LINE NO.= 88	KP1= 64	TAN1=	.0000	1.0000	.0000
	KP2= 66	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	65	67			
LINE NO.= 89	KP1= 65	TAN1=	.0000	1.0000	.0000
	KP2= 67	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	66	68			
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LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
 KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
 LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
 KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
 LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
 KP2= 34 TAN2= .0000 -1.0000 .0000

define areas for thermal shunts

DEFINE AREA BY LIST OF LINES
 LINE LIST = 35 53 37 52
 (TRAVERSED IN SAME DIRECTION AS LINE 35)

AREA NUMBER = 5

DEFINE AREA BY LIST OF LINES
 LINE LIST = 36 52 38 51
 (TRAVERSED IN SAME DIRECTION AS LINE 36)

AREA NUMBER = 6

DEFINE AREA BY LIST OF LINES
 LINE LIST = 37 58 39 59
 (TRAVERSED IN SAME DIRECTION AS LINE 37)

AREA NUMBER = 7

DEFINE AREA BY LIST OF LINES
 LINE LIST = 38 59 40 60
 (TRAVERSED IN SAME DIRECTION AS LINE 38)

AREA NUMBER = 8

DEFINE AREA BY LIST OF LINES
 LINE LIST = 39 61 41 62
 (TRAVERSED IN SAME DIRECTION AS LINE 39)

AREA NUMBER = 9

DEFINE AREA BY LIST OF LINES
 LINE LIST = 40 62 42 63
 (TRAVERSED IN SAME DIRECTION AS LINE 40)

AREA NUMBER = 10

DEFINE AREA BY LIST OF LINES
 LINE LIST = 41 64 43 65
 (TRAVERSED IN SAME DIRECTION AS LINE 41)

AREA NUMBER = 11

DEFINE AREA BY LIST OF LINES
 LINE LIST = 42 65 44 66
 (TRAVERSED IN SAME DIRECTION AS LINE 42)

AREA NUMBER = 12

DEFINE AREA BY LIST OF LINES
 LINE LIST = 43 67 45 68
 (TRAVERSED IN SAME DIRECTION AS LINE 43)

AREA NUMBER = 13

DEFINE AREA BY LIST OF LINES
 LINE LIST = 44 68 46 69
 (TRAVERSED IN SAME DIRECTION AS LINE 44)

AREA NUMBER = 14

DEFINE AREA BY LIST OF LINES

LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)

AREA NUMBER = 15

DEFINE AREA BY LIST OF LINES

LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)

AREA NUMBER = 16

DEFINE AREA BY LIST OF LINES

LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)

AREA NUMBER = 17

DEFINE AREA BY LIST OF LINES

LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)

AREA NUMBER = 18

DEFINE AREA BY LIST OF LINES

LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)

AREA NUMBER = 19

DEFINE AREA BY LIST OF LINES

LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)

AREA NUMBER = 20

DEFINE AREA BY LIST OF LINES

LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)

AREA NUMBER = 21

DEFINE AREA BY LIST OF LINES

LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)

AREA NUMBER = 22

DEFINE AREA BY LIST OF LINES

LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)

AREA NUMBER = 23

DEFINE AREA BY LIST OF LINES

LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)

AREA NUMBER = 24

DEFINE AREA BY LIST OF LINES

LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)

AREA NUMBER = 25

DEFINE AREA BY LIST OF LINES

LINE LIST = 91 32 92 57

(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
bottom guide						
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS 69 17

LINE NO.=	93	KP1=	69	TAN1=	.0000 -1.0000 .0000
		KP2=	17	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 18 70

LINE NO.=	94	KP1=	18	TAN1=	.0000 -1.0000 .0000
		KP2=	70	TAN2=	.0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS	71	69			
LINE NO.= 95 KP1=	71	TAN1=	.0000	-1.0000	.0000
KP2=	69	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	70	72			
LINE NO.= 96 KP1=	70	TAN1=	.0000	1.0000	.0000
KP2=	72	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	73	71			
LINE NO.= 97 KP1=	73	TAN1=	1.0000	.0000	.0000
KP2=	71	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	72	74			
LINE NO.= 98 KP1=	72	TAN1=	-1.0000	.0000	.0000
KP2=	74	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	20	73			
LINE NO.= 99 KP1=	20	TAN1=	1.0000	.0002	.0000
KP2=	73	TAN2=	-1.0000	-.0002	.0000

LINE CONNECTS KEYPOINTS	74	19			
LINE NO.= 100 KP1=	74	TAN1=	-1.0000	.0000	.0000
KP2=	19	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	75	20			
LINE NO.= 101 KP1=	75	TAN1=	-.0002	-1.0000	.0000
KP2=	20	TAN2=	.0002	1.0000	.0000

LINE CONNECTS KEYPOINTS	21	76			
LINE NO.= 102 KP1=	21	TAN1=	.0000	1.0000	.0000
KP2=	76	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	77	75			
LINE NO.= 103 KP1=	77	TAN1=	.0000	-1.0000	.0000
KP2=	75	TAN2=	.0000	1.0000	.0000

LINE CONNECTS KEYPOINTS	76	78			
LINE NO.= 104 KP1=	76	TAN1=	.0000	1.0000	.0000
KP2=	78	TAN2=	.0000	-1.0000	.0000

LINE CONNECTS KEYPOINTS	79	77			
LINE NO.= 105 KP1=	79	TAN1=	1.0000	.0000	.0000
KP2=	77	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	78	80			
LINE NO.= 106 KP1=	78	TAN1=	-1.0000	.0000	.0000
KP2=	80	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	23	79			
LINE NO.= 107 KP1=	23	TAN1=	1.0000	.0000	.0000
KP2=	79	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	80	22			
LINE NO.= 108 KP1=	80	TAN1=	-1.0000	.0000	.0000
KP2=	22	TAN2=	1.0000	.0000	.0000

bottom guide

LINE CONNECTS KEYPOINTS	81	27			
LINE NO.= 109 KP1=	81	TAN1=	-1.0000	.0000	.0000
KP2=	27	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	28	82			
LINE NO.= 110 KP1=	28	TAN1=	1.0000	.0000	.0000
KP2=	82	TAN2=	-1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	83	81			
LINE NO.= 111 KP1=	83	TAN1=	-1.0000	.0000	.0000
KP2=	81	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	82	84			
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LINE NO.= 112	KP1= 82	TAN1= 1.0000	.0000	.0000
	KP2= 84	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 85 83				
LINE NO.= 113	KP1= 85	TAN1= .0000	-1.0000	.0000
	KP2= 83	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 84 86				
LINE NO.= 114	KP1= 84	TAN1= .0000	1.0000	.0000
	KP2= 86	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 30 85				
LINE NO.= 115	KP1= 30	TAN1= .0002	-1.0000	.0000
	KP2= 85	TAN2= -.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS 86 29				
LINE NO.= 116	KP1= 86	TAN1= .0000	1.0000	.0000
	KP2= 29	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 87 30				
LINE NO.= 117	KP1= 87	TAN1= -1.0000	.0002	.0000
	KP2= 30	TAN2= 1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS 31 88				
LINE NO.= 118	KP1= 31	TAN1= 1.0000	.0000	.0000
	KP2= 88	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 89 87				
LINE NO.= 119	KP1= 89	TAN1= -1.0000	.0000	.0000
	KP2= 87	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 88 90				
LINE NO.= 120	KP1= 88	TAN1= 1.0000	.0000	.0000
	KP2= 90	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 91 89				
LINE NO.= 121	KP1= 91	TAN1= .0000	-1.0000	.0000
	KP2= 89	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 90 92				
LINE NO.= 122	KP1= 90	TAN1= .0000	1.0000	.0000
	KP2= 92	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 33 91				
LINE NO.= 123	KP1= 33	TAN1= .0000	-1.0000	.0000
	KP2= 91	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 92 32				
LINE NO.= 124	KP1= 92	TAN1= .0000	1.0000	.0000
	KP2= 32	TAN2= .0000	-1.0000	.0000
Guide thickness lines				
LINE CONNECTS KEYPOINTS 69 70				
LINE NO.= 125	KP1= 69	TAN1= -1.0000	.0000	.0000
	KP2= 70	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 71 72				
LINE NO.= 126	KP1= 71	TAN1= -.7071	-.7071	.0000
	KP2= 72	TAN2= .7071	.7071	.0000
LINE CONNECTS KEYPOINTS 73 74				
LINE NO.= 127	KP1= 73	TAN1= .0000	-1.0000	.0000
	KP2= 74	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 75 76				
LINE NO.= 128	KP1= 75	TAN1= -1.0000	.0000	.0000
	KP2= 76	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 77 78				
LINE NO.= 129	KP1= 77	TAN1= -.7071	-.7071	.0000

	KP2=	78	TAN2=	.7071	.7071	.0000
LINE CONNECTS KEYPOINTS 79 80						
LINE NO.=	130	KP1=	79	TAN1=	.0000	-1.0000
		KP2=	80	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 82 81						
LINE NO.=	131	KP1=	82	TAN1=	.0000	-1.0000
		KP2=	81	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 84 83						
LINE NO.=	132	KP1=	84	TAN1=	.7071	-.7071
		KP2=	83	TAN2=	-.7071	.7071
LINE CONNECTS KEYPOINTS 86 85						
LINE NO.=	133	KP1=	86	TAN1=	1.0000	.0000
		KP2=	85	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 88 87						
LINE NO.=	134	KP1=	88	TAN1=	.0000	-1.0000
		KP2=	87	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 90 89						
LINE NO.=	135	KP1=	90	TAN1=	.7071	-.7071
		KP2=	89	TAN2=	-.7071	.7071
LINE CONNECTS KEYPOINTS 92 91						
LINE NO.=	136	KP1=	92	TAN1=	1.0000	.0000
		KP2=	91	TAN2=	-1.0000	.0000

Guide steel

DEFINE AREA BY LIST OF LINES
 LINE LIST = 93 125 94 15
 (TRAVERSED IN SAME DIRECTION AS LINE 93)

AREA NUMBER = 27

DEFINE AREA BY LIST OF LINES
 LINE LIST = 95 126 96 125
 (TRAVERSED IN SAME DIRECTION AS LINE 95)

AREA NUMBER = 28

DEFINE AREA BY LIST OF LINES
 LINE LIST = 97 127 98 126
 (TRAVERSED IN SAME DIRECTION AS LINE 97)

AREA NUMBER = 29

DEFINE AREA BY LIST OF LINES
 LINE LIST = 99 17 100 127
 (TRAVERSED IN SAME DIRECTION AS LINE 99)

AREA NUMBER = 30

DEFINE AREA BY LIST OF LINES
 LINE LIST = 101 128 102 18
 (TRAVERSED IN SAME DIRECTION AS LINE 101)

AREA NUMBER = 31

DEFINE AREA BY LIST OF LINES
 LINE LIST = 103 129 104 128
 (TRAVERSED IN SAME DIRECTION AS LINE 103)

AREA NUMBER = 32

DEFINE AREA BY LIST OF LINES
 LINE LIST = 105 130 106 129
 (TRAVERSED IN SAME DIRECTION AS LINE 105)

AREA NUMBER = 33
DEFINE AREA BY LIST OF LINES
LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)
AREA NUMBER = 34
DEFINE AREA BY LIST OF LINES
LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)
AREA NUMBER = 35
DEFINE AREA BY LIST OF LINES
LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)
AREA NUMBER = 36
DEFINE AREA BY LIST OF LINES
LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)
AREA NUMBER = 37
DEFINE AREA BY LIST OF LINES
LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)
AREA NUMBER = 38
DEFINE AREA BY LIST OF LINES
LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)
AREA NUMBER = 39
DEFINE AREA BY LIST OF LINES
LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)
AREA NUMBER = 40
DEFINE AREA BY LIST OF LINES
LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)
AREA NUMBER = 41
DEFINE AREA BY LIST OF LINES
LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)
AREA NUMBER = 42
Guide gaps
DEFINE AREA BY LIST OF LINES
LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)
AREA NUMBER = 43
DEFINE AREA BY LIST OF LINES
LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)
AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 94 X,Y,Z= .100000E-01 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 95 X,Y,Z= .170000 .170000 .000000E+00 IN CSYS= 0

KEYPOINT 96 X,Y,Z= .170000 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 97 X,Y,Z= .135000E-01 .135000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 98 X,Y,Z= .135000E-01 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 99 X,Y,Z= .166500 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 100 X,Y,Z= .166500 .135000E-01 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 93 97
 LINE NO.= 141 KP1= 93 TAN1= -.7071 -.7071 .0000
 KP2= 97 TAN2= .7071 .7071 .0000

LINE CONNECTS KEYPOINTS 94 98
 LINE NO.= 142 KP1= 94 TAN1= -.7071 .7071 .0000
 KP2= 98 TAN2= .7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 100
 LINE NO.= 143 KP1= 96 TAN1= .7071 -.7071 .0000
 KP2= 100 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 95 99
 LINE NO.= 144 KP1= 95 TAN1= .7071 .7071 .0000
 KP2= 99 TAN2= -.7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 93
 LINE NO.= 145 KP1= 96 TAN1= 1.0000 .0000 .0000
 KP2= 93 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 100 97
 LINE NO.= 146 KP1= 100 TAN1= 1.0000 .0000 .0000
 KP2= 97 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 98 99
 LINE NO.= 147 KP1= 98 TAN1= -1.0000 .0000 .0000
 KP2= 99 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 94 95
 LINE NO.= 148 KP1= 94 TAN1= -1.0000 .0000 .0000
 KP2= 95 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 93 94
 LINE NO.= 149 KP1= 93 TAN1= .0000 -1.0000 .0000
 KP2= 94 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 97 98
 LINE NO.= 150 KP1= 97 TAN1= .0000 -1.0000 .0000
 KP2= 98 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 99 100
 LINE NO.= 151 KP1= 99 TAN1= .0000 1.0000 .0000
 KP2= 100 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 95 96
 LINE NO.= 152 KP1= 95 TAN1= .0000 1.0000 .0000
 KP2= 96 TAN2= .0000 -1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES

LINE LIST = 152 144 151 143
(TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES

LINE LIST = 148 142 147 144
(TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES

LINE LIST = 150 146 151 147
(TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55

Set element shapes and sizes for tubes
8x8 mesh in fuel with 2
divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
first fuel, then stainless tubes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
MAXIMUM NODE NUMBER = 81
MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
MAXIMUM NODE NUMBER = 145

MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
(A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290

MAXIMUM ELEMENT NUMBER = 256
(A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 435

MAXIMUM ELEMENT NUMBER = 384
(A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580

MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725

MAXIMUM ELEMENT NUMBER = 640
(A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870

MAXIMUM ELEMENT NUMBER = 768
(A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015

MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160

MAXIMUM ELEMENT NUMBER = 1024
(A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS

SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305

MAXIMUM ELEMENT NUMBER = 1152
(A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
MAXIMUM ELEMENT NUMBER = 1280
(A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
MAXIMUM ELEMENT NUMBER = 1536
(A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
MAXIMUM ELEMENT NUMBER = 1792
(A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
MAXIMUM ELEMENT NUMBER = 1920
(A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
MAXIMUM ELEMENT NUMBER = 2176
(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
 MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
 MAXIMUM ELEMENT NUMBER = 2432

(A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
 MAXIMUM ELEMENT NUMBER = 2560

(A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
 MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 66 TO 70 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
 MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
 Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.410 TIME= 15:14:24
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.460 TIME= 15:14:24
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.720 TIME= 15:14:25
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.770 TIME= 15:14:25
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 5 TO 26 IN STEPS OF 1

NUMBER OF AREAS MESHED = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	
NODE 875	USED FOR NODES	3741	
NODE 874	USED FOR NODES	3742	

NODE	873	USED FOR NODES	3743		
NODE	1195	USED FOR NODES	1381		
NODE	1050	USED FOR NODES	1236		
NODE	801	USED FOR NODES	905		
NODE	107	USED FOR NODES	3565		
NODE	1091	USED FOR NODES	3550		
NODE	132	USED FOR NODES	615		
NODE	1340	USED FOR NODES	1526		
NODE	656	USED FOR NODES	760		
NODE	1194	USED FOR NODES	1382		
NODE	802	USED FOR NODES	904		
NODE	1049	USED FOR NODES	1237		
NODE	106	USED FOR NODES	3566		
NODE	133	USED FOR NODES	614		
NODE	1092	USED FOR NODES	3551		
NODE	1339	USED FOR NODES	1527		
NODE	657	USED FOR NODES	759		
NODE	1048	USED FOR NODES	1238		
NODE	134	USED FOR NODES	613		
NODE	803	USED FOR NODES	903		
NODE	105	USED FOR NODES	3567		
NODE	1093	USED FOR NODES	3552		
NODE	1193	USED FOR NODES	1383		
NODE	658	USED FOR NODES	758		
NODE	1338	USED FOR NODES	1528		
NODE	104	USED FOR NODES	3568		
NODE	1192	USED FOR NODES	1384		
NODE	804	USED FOR NODES	902		
NODE	135	USED FOR NODES	612		
NODE	1047	USED FOR NODES	1239		
NODE	1094	USED FOR NODES	3553		
NODE	1337	USED FOR NODES	1529		
NODE	659	USED FOR NODES	757		
NODE	660	USED FOR NODES	756		
NODE	1191	USED FOR NODES	1385		
NODE	103	USED FOR NODES	3569		
NODE	805	USED FOR NODES	901		
NODE	1095	USED FOR NODES	3554		
NODE	136	USED FOR NODES	611		
NODE	1336	USED FOR NODES	1530		
NODE	1046	USED FOR NODES	1240		
NODE	661	USED FOR NODES	755		
NODE	1096	USED FOR NODES	3555		
NODE	1190	USED FOR NODES	1386		
NODE	102	USED FOR NODES	3570		
NODE	806	USED FOR NODES	900		
NODE	137	USED FOR NODES	610		
NODE	1335	USED FOR NODES	1531		
NODE	1045	USED FOR NODES	1241		
NODE	662	USED FOR NODES	754		
NODE	1097	USED FOR NODES	3556		
NODE	138	USED FOR NODES	609		
NODE	1044	USED FOR NODES	1242		
NODE	1189	USED FOR NODES	1387		
NODE	807	USED FOR NODES	899		
NODE	101	USED FOR NODES	3571		
NODE	1334	USED FOR NODES	1532		
NODE	780	USED FOR NODES	1747		
NODE	120	USED FOR NODES	151		
NODE	119	USED FOR NODES	152		
NODE	118	USED FOR NODES	153		
NODE	117	USED FOR NODES	154		
NODE	923	USED FOR NODES	3210		
NODE	1503	USED FOR NODES	3499		
NODE	1504	USED FOR NODES	3498		
NODE	777	USED FOR NODES	898	1742	3203
NODE	1188	USED FOR NODES	1357	2031	2177
NODE	1358	USED FOR NODES	2184		
NODE	1359	USED FOR NODES	2183		
NODE	1360	USED FOR NODES	2182		

NODE	1361	USED FOR NODES	2181		
NODE	1362	USED FOR NODES	2180		
NODE	1363	USED FOR NODES	2179		
NODE	1364	USED FOR NODES	2178		
NODE	778	USED FOR NODES	1749		
NODE	779	USED FOR NODES	1748		
NODE	1505	USED FOR NODES	3497		
NODE	1506	USED FOR NODES	3496		
NODE	1043	USED FOR NODES	1212	1886	2032
NODE	1213	USED FOR NODES	2039		
NODE	781	USED FOR NODES	1746		
NODE	782	USED FOR NODES	1745		
NODE	783	USED FOR NODES	1744		
NODE	784	USED FOR NODES	1743		
NODE	1214	USED FOR NODES	2038		
NODE	1215	USED FOR NODES	2037		
NODE	1507	USED FOR NODES	3495		
NODE	1508	USED FOR NODES	3494		
NODE	1509	USED FOR NODES	3493		
NODE	1216	USED FOR NODES	2036		
NODE	1217	USED FOR NODES	2035		
NODE	1218	USED FOR NODES	2034		
NODE	635	USED FOR NODES	1602		
NODE	1219	USED FOR NODES	2033		
NODE	1074	USED FOR NODES	1888		
NODE	636	USED FOR NODES	1601		
NODE	637	USED FOR NODES	1600		
NODE	929	USED FOR NODES	3204		
NODE	638	USED FOR NODES	1599		
NODE	100	USED FOR NODES	146	3564	
NODE	639	USED FOR NODES	1598		
NODE	928	USED FOR NODES	3205		
NODE	1333	USED FOR NODES	1502	2176	3468
NODE	1478	USED FOR NODES	3492		
NODE	1067	USED FOR NODES	1887	3548	
NODE	116	USED FOR NODES	147	608	1596
NODE	922	USED FOR NODES	3191		
NODE	924	USED FOR NODES	3209		
NODE	925	USED FOR NODES	3208		
NODE	926	USED FOR NODES	3207		
NODE	927	USED FOR NODES	3206		
NODE	121	USED FOR NODES	150		
NODE	122	USED FOR NODES	149		
NODE	123	USED FOR NODES	148		
NODE	632	USED FOR NODES	753	1597	1741
NODE	1073	USED FOR NODES	1889		
NODE	1072	USED FOR NODES	1890		
NODE	1071	USED FOR NODES	1891		
NODE	1070	USED FOR NODES	1892		
NODE	1069	USED FOR NODES	1893		
NODE	1068	USED FOR NODES	1894		
NODE	634	USED FOR NODES	1603		
NODE	633	USED FOR NODES	1604		
NODE	1961	USED FOR NODES	3590		
NODE	1920	USED FOR NODES	2106		
NODE	1671	USED FOR NODES	1775		
NODE	180	USED FOR NODES	3605		
NODE	2210	USED FOR NODES	3469		
NODE	1816	USED FOR NODES	3234		
NODE	2065	USED FOR NODES	2251		
NODE	221	USED FOR NODES	1630		
NODE	1962	USED FOR NODES	3591		
NODE	179	USED FOR NODES	3606		
NODE	1919	USED FOR NODES	2107		
NODE	2209	USED FOR NODES	3470		
NODE	2064	USED FOR NODES	2252		
NODE	1672	USED FOR NODES	1774		
NODE	222	USED FOR NODES	1629		
NODE	1817	USED FOR NODES	3233		
NODE	1673	USED FOR NODES	1773		

NODE	178	USED FOR NODES	3607		
NODE	223	USED FOR NODES	1628		
NODE	1963	USED FOR NODES	3592		
NODE	1818	USED FOR NODES	3232		
NODE	1918	USED FOR NODES	2108		
NODE	2208	USED FOR NODES	3471		
NODE	2063	USED FOR NODES	2253		
NODE	1917	USED FOR NODES	2109		
NODE	177	USED FOR NODES	3608		
NODE	2207	USED FOR NODES	3472		
NODE	224	USED FOR NODES	1627		
NODE	1674	USED FOR NODES	1772		
NODE	1964	USED FOR NODES	3593		
NODE	1819	USED FOR NODES	3231		
NODE	2062	USED FOR NODES	2254		
NODE	1916	USED FOR NODES	2110		
NODE	176	USED FOR NODES	3609		
NODE	2206	USED FOR NODES	3473		
NODE	2061	USED FOR NODES	2255		
NODE	225	USED FOR NODES	1626		
NODE	1965	USED FOR NODES	3594		
NODE	1675	USED FOR NODES	1771		
NODE	1820	USED FOR NODES	3230		
NODE	1966	USED FOR NODES	3595		
NODE	175	USED FOR NODES	3610		
NODE	1821	USED FOR NODES	3229		
NODE	2205	USED FOR NODES	3474		
NODE	1915	USED FOR NODES	2111		
NODE	226	USED FOR NODES	1625		
NODE	1676	USED FOR NODES	1770		
NODE	2060	USED FOR NODES	2256		
NODE	1822	USED FOR NODES	3228		
NODE	174	USED FOR NODES	3611		
NODE	1967	USED FOR NODES	3596		
NODE	2204	USED FOR NODES	3475		
NODE	1914	USED FOR NODES	2112		
NODE	227	USED FOR NODES	1624		
NODE	2059	USED FOR NODES	2257		
NODE	1677	USED FOR NODES	1769		
NODE	199	USED FOR NODES	298		
NODE	198	USED FOR NODES	299		
NODE	1792	USED FOR NODES	2467	3227	
NODE	1793	USED FOR NODES	2474		
NODE	1939	USED FOR NODES	2618		
NODE	1938	USED FOR NODES	2619		
NODE	1794	USED FOR NODES	2473		
NODE	1913	USED FOR NODES	2082	2611	2757
NODE	1795	USED FOR NODES	2472		
NODE	1796	USED FOR NODES	2471		
NODE	1797	USED FOR NODES	2470		
NODE	1798	USED FOR NODES	2469		
NODE	1799	USED FOR NODES	2468		
NODE	2203	USED FOR NODES	2901	3442	
NODE	2058	USED FOR NODES	2227	2756	2902
NODE	2234	USED FOR NODES	2903		
NODE	173	USED FOR NODES	291	3604	
NODE	2083	USED FOR NODES	2764		
NODE	2233	USED FOR NODES	2904		
NODE	2232	USED FOR NODES	2905		
NODE	2231	USED FOR NODES	2906		
NODE	2230	USED FOR NODES	2907		
NODE	2229	USED FOR NODES	2908		
NODE	2084	USED FOR NODES	2763		
NODE	1937	USED FOR NODES	2612	3588	
NODE	2228	USED FOR NODES	2909		
NODE	1940	USED FOR NODES	2617		
NODE	1941	USED FOR NODES	2616		
NODE	1942	USED FOR NODES	2615		
NODE	2085	USED FOR NODES	2762		
NODE	1943	USED FOR NODES	2614		

NODE	2086	USED FOR NODES	2761		
NODE	1944	USED FOR NODES	2613		
NODE	2087	USED FOR NODES	2760		
NODE	197	USED FOR NODES	292	1623	2321
NODE	2088	USED FOR NODES	2759		
NODE	200	USED FOR NODES	297		
NODE	201	USED FOR NODES	296		
NODE	202	USED FOR NODES	295		
NODE	203	USED FOR NODES	294		
NODE	1647	USED FOR NODES	1768	2322	2466
NODE	1648	USED FOR NODES	2329		
NODE	1649	USED FOR NODES	2328		
NODE	204	USED FOR NODES	293		
NODE	1654	USED FOR NODES	2323		
NODE	1653	USED FOR NODES	2324		
NODE	1652	USED FOR NODES	2325		
NODE	1651	USED FOR NODES	2326		
NODE	2089	USED FOR NODES	2758		
NODE	1650	USED FOR NODES	2327		
NODE	325	USED FOR NODES	3645		
NODE	2686	USED FOR NODES	3630		
NODE	2790	USED FOR NODES	2976		
NODE	2541	USED FOR NODES	3258		
NODE	366	USED FOR NODES	2355		
NODE	2396	USED FOR NODES	2500		
NODE	2935	USED FOR NODES	3443		
NODE	2645	USED FOR NODES	2831		
NODE	2789	USED FOR NODES	2977		
NODE	324	USED FOR NODES	3646		
NODE	2542	USED FOR NODES	3257		
NODE	367	USED FOR NODES	2354		
NODE	2644	USED FOR NODES	2832		
NODE	2397	USED FOR NODES	2499		
NODE	2934	USED FOR NODES	3444		
NODE	2687	USED FOR NODES	3631		
NODE	323	USED FOR NODES	3647		
NODE	2398	USED FOR NODES	2498		
NODE	2643	USED FOR NODES	2833		
NODE	2688	USED FOR NODES	3632		
NODE	2788	USED FOR NODES	2978		
NODE	2543	USED FOR NODES	3256		
NODE	368	USED FOR NODES	2353		
NODE	2933	USED FOR NODES	3445		
NODE	2642	USED FOR NODES	2834		
NODE	322	USED FOR NODES	3648		
NODE	2787	USED FOR NODES	2979		
NODE	2399	USED FOR NODES	2497		
NODE	2544	USED FOR NODES	3255		
NODE	369	USED FOR NODES	2352		
NODE	2932	USED FOR NODES	3446		
NODE	2689	USED FOR NODES	3633		
NODE	2641	USED FOR NODES	2835		
NODE	321	USED FOR NODES	3649		
NODE	2786	USED FOR NODES	2980		
NODE	2400	USED FOR NODES	2496		
NODE	2931	USED FOR NODES	3447		
NODE	2545	USED FOR NODES	3254		
NODE	370	USED FOR NODES	2351		
NODE	2690	USED FOR NODES	3634		
NODE	320	USED FOR NODES	3650		
NODE	2785	USED FOR NODES	2981		
NODE	2401	USED FOR NODES	2495		
NODE	2640	USED FOR NODES	2836		
NODE	2546	USED FOR NODES	3253		
NODE	371	USED FOR NODES	2350		
NODE	2930	USED FOR NODES	3448		
NODE	2691	USED FOR NODES	3635		
NODE	319	USED FOR NODES	3651		
NODE	2692	USED FOR NODES	3636		
NODE	372	USED FOR NODES	2349		

NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		
NODE	3077	USED FOR NODES	3374		
NODE	514	USED FOR NODES	3329		

NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.450 TIME= 15:14:29
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 16.170 TIME= 15:14:29
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 16.180 TIME= 15:14:29
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38 USED FOR KEYPOINT(S)	150	
KEYPOINT	40 USED FOR KEYPOINT(S)	93	
KEYPOINT	41 USED FOR KEYPOINT(S)	155	198
KEYPOINT	43 USED FOR KEYPOINT(S)	96	101
KEYPOINT	44 USED FOR KEYPOINT(S)	203	238
KEYPOINT	46 USED FOR KEYPOINT(S)	105	109
KEYPOINT	47 USED FOR KEYPOINT(S)	243	262
KEYPOINT	49 USED FOR KEYPOINT(S)	113	117
KEYPOINT	50 USED FOR KEYPOINT(S)	267	
KEYPOINT	52 USED FOR KEYPOINT(S)	121	
KEYPOINT	54 USED FOR KEYPOINT(S)	142	
KEYPOINT	56 USED FOR KEYPOINT(S)	134	141
KEYPOINT	58 USED FOR KEYPOINT(S)	126	133
KEYPOINT	60 USED FOR KEYPOINT(S)	94	125
KEYPOINT	62 USED FOR KEYPOINT(S)	149	158
KEYPOINT	64 USED FOR KEYPOINT(S)	157	166
KEYPOINT	66 USED FOR KEYPOINT(S)	165	174
KEYPOINT	68 USED FOR KEYPOINT(S)	173	
KEYPOINT	69 USED FOR KEYPOINT(S)	147	
KEYPOINT	71 USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73 USED FOR KEYPOINT(S)	195	230
KEYPOINT	75 USED FOR KEYPOINT(S)	227	233
KEYPOINT	77 USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79 USED FOR KEYPOINT(S)	123	
KEYPOINT	81 USED FOR KEYPOINT(S)	265	
KEYPOINT	83 USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85 USED FOR KEYPOINT(S)	249	259
KEYPOINT	87 USED FOR KEYPOINT(S)	217	253
KEYPOINT	89 USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91 USED FOR KEYPOINT(S)	177	
KEYPOINT	95 USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107 USED FOR KEYPOINT(S)	110	185 221
KEYPOINT	131 USED FOR KEYPOINT(S)	137	182 189
KEYPOINT	153 USED FOR KEYPOINT(S)	163	197 206

KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254
LINE	58 USED FOR LINE(S)	235		
LINE	60 USED FOR LINE(S)	145		
LINE	61 USED FOR LINE(S)	307		
LINE	63 USED FOR LINE(S)	157		
LINE	64 USED FOR LINE(S)	367		
LINE	66 USED FOR LINE(S)	169		
LINE	67 USED FOR LINE(S)	403		
LINE	69 USED FOR LINE(S)	181		
LINE	76 USED FOR LINE(S)	213		
LINE	78 USED FOR LINE(S)	201		
LINE	80 USED FOR LINE(S)	189		
LINE	82 USED FOR LINE(S)	149		
LINE	84 USED FOR LINE(S)	225		
LINE	86 USED FOR LINE(S)	237		
LINE	88 USED FOR LINE(S)	249		
LINE	90 USED FOR LINE(S)	261		
LINE	95 USED FOR LINE(S)	220		
LINE	97 USED FOR LINE(S)	295		
LINE	103 USED FOR LINE(S)	340		
LINE	105 USED FOR LINE(S)	187		
LINE	111 USED FOR LINE(S)	397		
LINE	113 USED FOR LINE(S)	376		
LINE	119 USED FOR LINE(S)	325		
LINE	121 USED FOR LINE(S)	268		
LINE	137 USED FOR LINE(S)	223		

*** WARNING ***

Due to merge, line 137 is now meshed.

LINE 138 USED FOR LINE(S) 184

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 138 is now meshed.

LINE 139 USED FOR LINE(S) 400

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 139 is now meshed.

LINE 140 USED FOR LINE(S) 265

CP= 16.630 TIME= 15:14:30

*** WARNING ***

Due to merge, line 140 is now meshed.

LINE	148 USED FOR LINE(S)	193
LINE	152 USED FOR LINE(S)	153
LINE	160 USED FOR LINE(S)	165
LINE	163 USED FOR LINE(S)	277
LINE	172 USED FOR LINE(S)	177
LINE	175 USED FOR LINE(S)	337
LINE	196 USED FOR LINE(S)	273
LINE	199 USED FOR LINE(S)	205
LINE	208 USED FOR LINE(S)	285
LINE	211 USED FOR LINE(S)	217
LINE	229 USED FOR LINE(S)	247
LINE	232 USED FOR LINE(S)	297
LINE	241 USED FOR LINE(S)	259
LINE	244 USED FOR LINE(S)	309
LINE	253 USED FOR LINE(S)	271
LINE	256 USED FOR LINE(S)	321
LINE	280 USED FOR LINE(S)	333
LINE	283 USED FOR LINE(S)	289
LINE	292 USED FOR LINE(S)	345
LINE	301 USED FOR LINE(S)	319
LINE	304 USED FOR LINE(S)	357
LINE	313 USED FOR LINE(S)	331
LINE	316 USED FOR LINE(S)	369
LINE	328 USED FOR LINE(S)	381
LINE	343 USED FOR LINE(S)	349
LINE	361 USED FOR LINE(S)	379

CP= 16.640 TIME= 15:14:30

LINE 364 USED FOR LINE(S) 393
LINE 373 USED FOR LINE(S) 391

Create mesh in UCF inner shell
(L's 105,108 ????)

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 13 TO 22 STEP 1

10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES

LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 32 STEP 1

10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES

LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING *** CP= 17.760 TIME= 15:14:31
Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE *** CP= 17.760 TIME= 15:14:31
Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3327	3328	3329	3330	3331	3332	3333	3334	3335	3354
3355	3356	3357	3358	3359	3360	3361	3362	3363	3364
3365	3366	3367	3368	3402	3403	3404	3417	3418	3419
3453	3454	3455	3456	3457	3458	3459	3460	3461	3462
3463	3464	3465	3466	3467	3486	3487	3488	3489	3490
3491	3492	3493	3494						

*** WARNING *** CP= 18.590 TIME= 15:14:32
Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE *** CP= 18.590 TIME= 15:14:32
Worst shape angle is 29 degrees.

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4375
 MAXIMUM ELEMENT NUMBER = 3680
 Delete concatenated lines
 (L's freed up 105,108 ????)
 LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 6 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 15

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4738
 MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 22.120 TIME= 15:14:40
 Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 22.180 TIME= 15:14:40
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 22.180 TIME= 15:14:40
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50 IN STEPS OF	1
** AREA	43 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	44 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **
** AREA	45 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	46 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 27.470 TIME= 15:14:50
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 27.510 TIME= 15:14:50
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 27.520 TIME= 15:14:50
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES	14 TO	16 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4596	

GENERATE NODES AND ELEMENTS

ON LINES	19 TO	21 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4620	

GENERATE NODES AND ELEMENTS

ON LINES	24 TO	26 IN STEPS OF	2
NUMBER OF LINES MESHED	=	2	
MAXIMUM NODE NUMBER	=	5106	
MAXIMUM ELEMENT NUMBER	=	4644	

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.900

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET

XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.

- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.

DISPLAY TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=

IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.

- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.

DISPLAY TITLE=

44 BWR UCF/Waste Package - 1/2 FEM Model

View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=

IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.

- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.

DISPLAY TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 15:15:00 JUN 18, 1995 CP= 32.850
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=

IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM
260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD

NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING *** CP= 33.080 TIME= 15:15:00
No space node defined. An enclosed system need not have a space node.
For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=

IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 44.440

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:15:24 JUN 18, 1995 CP= 44.440
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES

*** NOTE *** CP= 44.490 TIME= 15:15:24
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.490 TIME= 15:15:24
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.500 TIME= 15:15:24
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.510 TIME= 15:15:24
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.510 TIME= 15:15:24
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.520 TIME= 15:15:24
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.520 TIME= 15:15:24
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.530 TIME= 15:15:24
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.530 TIME= 15:15:24
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 74 because area 17 is meshed. Only
elements are deleted.

elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 92 because area 26 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.540 TIME= 15:15:24
Nodes cannot be cleared from line 93 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 94 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 96 because area 28 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.550 TIME= 15:15:24
Nodes cannot be cleared from line 98 because area 29 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.560 TIME= 15:15:24
Nodes cannot be cleared from line 100 because area 30 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.560 TIME= 15:15:24
Nodes cannot be cleared from line 102 because area 31 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.570 TIME= 15:15:24
Nodes cannot be cleared from line 104 because area 32 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.570 TIME= 15:15:24
Nodes cannot be cleared from line 106 because area 33 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 107 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 108 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 109 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.580 TIME= 15:15:24
Nodes cannot be cleared from line 110 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.590 TIME= 15:15:24
Nodes cannot be cleared from line 112 because area 36 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.590 TIME= 15:15:24
Nodes cannot be cleared from line 114 because area 37 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.600 TIME= 15:15:24
Nodes cannot be cleared from line 116 because area 38 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.600 TIME= 15:15:24
Nodes cannot be cleared from line 118 because area 39 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 120 because area 40 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 122 because area 41 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.610 TIME= 15:15:24
Nodes cannot be cleared from line 123 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 124 because area 42 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 137 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 138 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.620 TIME= 15:15:24
Nodes cannot be cleared from line 139 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 44.630 TIME= 15:15:24
Nodes cannot be cleared from line 140 because area 50 is meshed. Only
elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 44.640

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 44.650 TIME= 15:15:24
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO= 273.150

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

```
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1409103 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.
ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.
SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.
SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.
ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.
DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP
TIME= .10000E-05
USE AUTOMATIC TIME STEPPING THIS LOAD STEP
STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 45.890 TIME= 15:15:27
All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:15:27 JUN 18, 1995 CP= 45.900
FOR SUPPORT CALL ROBERT BAHNEY PHONE: (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
```

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM. TEMP
 ANALYSIS TYPETRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO 273.15
 NEWTON-RAPHSON OPTIONPROGRAM CHOSEN

*** NOTE *** CP= 46.840 TIME= 15:15:29
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 47.230 TIME= 15:15:29
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER. 1
 TIME AT END OF THE LOAD STEP.10000E-05
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 0
 MAXIMUM NUMBER OF SUBSTEPS 0
 MINIMUM NUMBER OF SUBSTEPS 1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
 STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS OFF
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4045.5

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .33687	IXX = 641.6	IXX = 641.6
YC = .11253E-10	IYY = 641.6	IYY = 182.5
ZC = .00000E+00	IZZ = 1283.	IZZ = 824.0
	IXY = .1364E-12	IXY = .1534E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4045.51

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 64.980 TIME= 15:16:06
 Coefficient ratio exceeds 1.0e8. - Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	12.010	.003
18	1	MATRIX50	.090	.090

Time at end of element matrix formulation CP= 64.98.
HT FLOW CONVERGENCE VALUE= 9968. CRITERION= 9.968

Estimated number of active DOF= 4513.
Maximum wavefront= 311.

Time at end of matrix triangularization CP= 83.98.
Equation solver maximum pivot= 835.577491 at node 3669 TEMP.
Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 237.7
HT FLOW CONVERGENCE VALUE= 108.3 CRITERION= .4238
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -48.29
HT FLOW CONVERGENCE VALUE= 10.17 CRITERION= .4119
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 5.127
HT FLOW CONVERGENCE VALUE= .6486 CRITERION= .4092
EQUIL ITER 4 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3757
HT FLOW CONVERGENCE VALUE= .3372E-01 CRITERION= .4091 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	6.550	.001
18	1	MATRIX50	.120	.120

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.970	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4
*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS

ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 4513
R.M.S. WAVEFRONT SIZE = 152.0

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44j.emat
2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44j.esav
5.219 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44j.tri
.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44j.dsub
2.484 MB WRITTEN ON RESULTS FILE: ucf44j.rth
Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121. NODES (OF 4634 DEFINED) SELECTED FROM
2. SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.961 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.991 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.059 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 213.010 TIME= 15:19:03
This load step will be a static (steady-state) step.

*** NOTE *** CP= 213.420 TIME= 15:19:04
The step data was checked and warning messages were found.
Please review output or errors file (ucf44j.err) for these warning
messages.

*** NOTE *** CP= 213.420 TIME= 15:19:04
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:19:04 JUN 18, 1995 CP= 213.420
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 0
MAXIMUM NUMBER OF SUBSTEPS 0
MINIMUM NUMBER OF SUBSTEPS 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS OFF
TERMINATE ANALYSIS IF NO? CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1633E+05 CRITERION= 16.34
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 43.10
HT FLOW CONVERGENCE VALUE= 33.78 CRITERION= .4039
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.21
HT FLOW CONVERGENCE VALUE= 3.154 CRITERION= .4000
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.420
HT FLOW CONVERGENCE VALUE= .1866 CRITERION= .3993 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3
*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7
*** TIME = .200000E-05 TIME INC = .100000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP
Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS
FOR AUTOMATIC TIME STEPPING:

USE 40 SUBSTEPS AS A MAXIMUM
USE 5 SUBSTEPS AS A MINIMUM
USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP
AS THE STARTING TIME STEP SIZE.
Begin Transient
Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT. ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM

22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 68.961 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 68.991 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.059 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 323.660 TIME= 15:20:59
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:20:59 JUN 18, 1995 CP= 323.660
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 3
TIME AT END OF THE LOAD STEP. 31.558
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1866 CRITERION= .3993
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2100E-03

HT FLOW CONVERGENCE VALUE= .6066E-05 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 1 COMPLETED. CUM ITER = 8
 *** TIME = .788942 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1933 OSCILLATION LIMIT = .1525
 *** AUTO STEP TIME: NEXT TIME INC = .78894 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3529 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2750E-03
 HT FLOW CONVERGENCE VALUE= .8856E-05 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
 *** TIME = 1.57788 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1129 OSCILLATION LIMIT = .8906E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3321 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3714E-03
 HT FLOW CONVERGENCE VALUE= .1636E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
 *** TIME = 3.94470 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .3815E-01 OSCILLATION LIMIT = .9030E-01
 *** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3127 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2235E-03
 HT FLOW CONVERGENCE VALUE= .3505E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
 *** TIME = 10.2562 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .6284E-02 OSCILLATION LIMIT = .3966E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3038 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1649E-03
 HT FLOW CONVERGENCE VALUE= .3172E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
 *** TIME = 16.5677 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .2165E-02 OSCILLATION LIMIT = .1366E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3000 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1646E-03
 HT FLOW CONVERGENCE VALUE= .3083E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
 *** TIME = 22.8793 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1942E-02 OSCILLATION LIMIT = .1226E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .2966 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1644E-03
 HT FLOW CONVERGENCE VALUE= .3020E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
 *** TIME = 29.1908 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1831E-02 OSCILLATION LIMIT = .1156E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2934 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6156E-04
 HT FLOW CONVERGENCE VALUE= .1121E-04 CRITERION= .3994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
 *** TIME = 31.5576 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .1780E-02 OSCILLATION LIMIT = .4213E-02

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:30:08 JUN 18, 1995 CP= 774.860
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 258.3 CRITERION= .4756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7356
 HT FLOW CONVERGENCE VALUE= .4290 CRITERION= .3977
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8267E-01
 HT FLOW CONVERGENCE VALUE= .2891E-01 CRITERION= .3977 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1098E-04 OSCILLATION LIMIT = .8659
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 258.7 CRITERION= .4744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7358
 HT FLOW CONVERGENCE VALUE= .5117 CRITERION= .3982
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1117
 HT FLOW CONVERGENCE VALUE= .3111E-01 CRITERION= .3983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9771E-06 OSCILLATION LIMIT = .7709E-01
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 774.9 CRITERION= .8713
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.207
 HT FLOW CONVERGENCE VALUE= 1.466 CRITERION= .3971
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4222
 HT FLOW CONVERGENCE VALUE= .1216 CRITERION= .3971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1509E-05 OSCILLATION LIMIT = .3572
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 775.2 CRITERION= .8708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.207
 HT FLOW CONVERGENCE VALUE= 1.498 CRITERION= .3971
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299
 HT FLOW CONVERGENCE VALUE= .1225 CRITERION= .3971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 631184. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1247E-05 OSCILLATION LIMIT = .2951
 *** AUTO TIME STEP: NEXT TIME INC = .40096E+06 INCREASED (FACTOR = 1.6941)

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.818 CRITERION= .3958
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7860
 HT FLOW CONVERGENCE VALUE= .2265 CRITERION= .3957 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .103215E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1390E-05 OSCILLATION LIMIT = .5573
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.768 CRITERION= .3954
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7898

HT FLOW CONVERGENCE VALUE= .2279 CRITERION= .3953 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .143311E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1280E-05 OSCILLATION LIMIT = .5133
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.906 CRITERION= .3939
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7874
 HT FLOW CONVERGENCE VALUE= .2290 CRITERION= .3938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .183407E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1312E-05 OSCILLATION LIMIT = .5259
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1312. CRITERION= 1.369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.943 CRITERION= .3935
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7845
 HT FLOW CONVERGENCE VALUE= .2298 CRITERION= .3934 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .223503E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1267E-05 OSCILLATION LIMIT = .5082
 *** AUTO STEP TIME: NEXT TIME INC = .40096E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1311. CRITERION= 1.369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 3.739
 HT FLOW CONVERGENCE VALUE= 2.816 CRITERION= .3920
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7810
 HT FLOW CONVERGENCE VALUE= .2333 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .263600E+07 TIME INC = 400963.
 *** RESPONSE EIGENVALUE = .1293E-05 OSCILLATION LIMIT = .5186
 *** AUTO STEP TIME: NEXT TIME INC = .25990E+06 DECREASED (FACTOR = .6482)

HT FLOW CONVERGENCE VALUE= 850.0 CRITERION= .9358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.423
 HT FLOW CONVERGENCE VALUE= 2.027 CRITERION= .3919
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4803
 HT FLOW CONVERGENCE VALUE= .1474 CRITERION= .3919 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 10 COMPLETED. CUM ITER = 35
 *** TIME = .289589E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1212E-05 OSCILLATION LIMIT = .3150
 *** AUTO STEP TIME: NEXT TIME INC = .25990E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 849.4 CRITERION= .9355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.423
 HT FLOW CONVERGENCE VALUE= 2.177 CRITERION= .3908
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4773
 HT FLOW CONVERGENCE VALUE= .1478 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 11 COMPLETED. CUM ITER = 37
 *** TIME = .315579E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1317E-05 OSCILLATION LIMIT = .3422

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:45:44 JUN 18, 1995 CP= 1675.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10-yr old, 49 GWD/WTU SWF

HT FLOW CONVERGENCE VALUE= 168.1 CRITERION= .4254
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7726
 HT FLOW CONVERGENCE VALUE= .4975 CRITERION= .3925
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1318
 HT FLOW CONVERGENCE VALUE= .3339E-01 CRITERION= .3926 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 39
 *** TIME = .341569E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .1907E-05 OSCILLATION LIMIT = .4956
 *** AUTO STEP TIME: NEXT TIME INC = .25990E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 167.4 CRITERION= .4268
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4443
 HT FLOW CONVERGENCE VALUE= .3718 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 40
 *** TIME = .367559E+07 TIME INC = 259898.
 *** RESPONSE EIGENVALUE = .9107E-05 OSCILLATION LIMIT = 2.367
 *** AUTO TIME STEP: NEXT TIME INC = 86633. DECREASED (FACTOR = .3333)

HT FLOW CONVERGENCE VALUE= 56.35 CRITERION= .3947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2204
 HT FLOW CONVERGENCE VALUE= .1591 CRITERION= .3920 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 41
 *** TIME = .376222E+07 TIME INC = 86632.5
 *** RESPONSE EIGENVALUE = .6377E-05 OSCILLATION LIMIT = .5525
 *** AUTO STEP TIME: NEXT TIME INC = 86633. UNCHANGED

HT FLOW CONVERGENCE VALUE= 55.60 CRITERION= .3960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1481
 HT FLOW CONVERGENCE VALUE= .1183 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 42
 *** TIME = .384885E+07 TIME INC = 86632.5
 *** RESPONSE EIGENVALUE = .2604E-04 OSCILLATION LIMIT = 2.255
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .9107)

HT FLOW CONVERGENCE VALUE= 51.33 CRITERION= .3941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1500
 HT FLOW CONVERGENCE VALUE= .1324 CRITERION= .3918 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 43
 *** TIME = .392775E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9282E-05 OSCILLATION LIMIT = .7323
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.61 CRITERION= .3950
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1158 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 44
 *** TIME = .400664E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1324E-04 OSCILLATION LIMIT = 1.045
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3940
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1470
 HT FLOW CONVERGENCE VALUE= .1300 CRITERION= .3916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 45
 *** TIME = .408553E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9291E-05 OSCILLATION LIMIT = .7330
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.62 CRITERION= .3949
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1165 CRITERION= .3906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP      5  SUBSTEP      8  COMPLETED.    CUM ITER =    46
*** TIME = .416443E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1125E-04    OSCILLATION LIMIT = .8874
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.32    CRITERION= .3939
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1454
    HT FLOW CONVERGENCE VALUE= .1287    CRITERION= .3915    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP      9  COMPLETED.    CUM ITER =    47
*** TIME = .424332E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8561E-05    OSCILLATION LIMIT = .6754
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 50.62    CRITERION= .3947
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
    HT FLOW CONVERGENCE VALUE= .1171    CRITERION= .3905    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     10  COMPLETED.    CUM ITER =    48
*** TIME = .432222E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1007E-04    OSCILLATION LIMIT = .7945
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.32    CRITERION= .3938
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1443
    HT FLOW CONVERGENCE VALUE= .1282    CRITERION= .3913    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     11  COMPLETED.    CUM ITER =    49
*** TIME = .440111E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7993E-05    OSCILLATION LIMIT = .6306
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 50.63    CRITERION= .3946
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
    HT FLOW CONVERGENCE VALUE= .1179    CRITERION= .3903    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     12  COMPLETED.    CUM ITER =    50
*** TIME = .448000E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9191E-05    OSCILLATION LIMIT = .7251
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.32    CRITERION= .3937
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1439
    HT FLOW CONVERGENCE VALUE= .1286    CRITERION= .3912    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     13  COMPLETED.    CUM ITER =    51
*** TIME = .455890E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7511E-05    OSCILLATION LIMIT = .5926
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 50.64    CRITERION= .3945
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
    HT FLOW CONVERGENCE VALUE= .1188    CRITERION= .3902    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     14  COMPLETED.    CUM ITER =    52
*** TIME = .463779E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8497E-05    OSCILLATION LIMIT = .6704
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 51.32    CRITERION= .3936
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1436
    HT FLOW CONVERGENCE VALUE= .1262    CRITERION= .3910    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      5  SUBSTEP     15  COMPLETED.    CUM ITER =    53
*** TIME = .471669E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7089E-05    OSCILLATION LIMIT = .5593
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 50.64    CRITERION= .3943
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349

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HT FLOW CONVERGENCE VALUE= .1126 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 16 COMPLETED. CUM ITER = 54
 *** TIME = .479558E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7934E-05 OSCILLATION LIMIT = .6260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3935
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1433
 HT FLOW CONVERGENCE VALUE= .1185 CRITERION= .3909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 17 COMPLETED. CUM ITER = 55
 *** TIME = .487447E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6705E-05 OSCILLATION LIMIT = .5290
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.65 CRITERION= .3942
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1100 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 18 COMPLETED. CUM ITER = 56
 *** TIME = .495337E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7481E-05 OSCILLATION LIMIT = .5902
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1431
 HT FLOW CONVERGENCE VALUE= .1167 CRITERION= .3908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 19 COMPLETED. CUM ITER = 57
 *** TIME = .503226E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6358E-05 OSCILLATION LIMIT = .5016
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.66 CRITERION= .3941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1083 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 20 COMPLETED. CUM ITER = 58
 *** TIME = .511116E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7073E-05 OSCILLATION LIMIT = .5580
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1428
 HT FLOW CONVERGENCE VALUE= .1145 CRITERION= .3906 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 21 COMPLETED. CUM ITER = 59
 *** TIME = .519005E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6053E-05 OSCILLATION LIMIT = .4775
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.67 CRITERION= .3939
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1071 CRITERION= .3898 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 22 COMPLETED. CUM ITER = 60
 *** TIME = .526894E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6712E-05 OSCILLATION LIMIT = .5295
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .3931
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1426
 HT FLOW CONVERGENCE VALUE= .1131 CRITERION= .3905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 23 COMPLETED. CUM ITER = 61
 *** TIME = .534784E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5761E-05 OSCILLATION LIMIT = .4545
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.68 CRITERION= .3938
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1045 CRITERION= .3897 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 62
 *** TIME = .542673E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6406E-05 OSCILLATION LIMIT = .5054
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.33 CRITERION= .3930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1424
 HT FLOW CONVERGENCE VALUE= .1097 CRITERION= .3904 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 63
 *** TIME = .550563E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5505E-05 OSCILLATION LIMIT = .4343
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.70 CRITERION= .3937
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .3896 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 64
 *** TIME = .558452E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6132E-05 OSCILLATION LIMIT = .4837
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.34 CRITERION= .3929
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1422
 HT FLOW CONVERGENCE VALUE= .1078 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 65
 *** TIME = .566341E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5263E-05 OSCILLATION LIMIT = .4152
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.72 CRITERION= .3935
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .3894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 66
 *** TIME = .574231E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5878E-05 OSCILLATION LIMIT = .4637
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.35 CRITERION= .3928
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1420
 HT FLOW CONVERGENCE VALUE= .1053 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 67
 *** TIME = .582120E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5038E-05 OSCILLATION LIMIT = .3974
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.73 CRITERION= .3934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
 HT FLOW CONVERGENCE VALUE= .9901E-01 CRITERION= .3893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 68
 *** TIME = .590010E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5659E-05 OSCILLATION LIMIT = .4465
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.36 CRITERION= .3927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1418
 HT FLOW CONVERGENCE VALUE= .1056 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 69
 *** TIME = .597899E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4831E-05 OSCILLATION LIMIT = .3812

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.75 CRITERION= .3933
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
HT FLOW CONVERGENCE VALUE= .9895E-01 CRITERION= .3892 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 32 COMPLETED. CUM ITER = 70
*** TIME = .605788E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5443E-05 OSCILLATION LIMIT = .4295
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.37 CRITERION= .3926
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1416
HT FLOW CONVERGENCE VALUE= .1039 CRITERION= .3898 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 33 COMPLETED. CUM ITER = 71
*** TIME = .613678E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4653E-05 OSCILLATION LIMIT = .3671
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.77 CRITERION= .3932
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1349
HT FLOW CONVERGENCE VALUE= .9875E-01 CRITERION= .3891 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 34 COMPLETED. CUM ITER = 72
*** TIME = .621567E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5249E-05 OSCILLATION LIMIT = .4141
*** AUTO TIME STEP: NEXT TIME INC = 47940. DECREASED (FACTOR = .6076)

HT FLOW CONVERGENCE VALUE= 31.36 CRITERION= .3903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8854E-01
HT FLOW CONVERGENCE VALUE= .6275E-01 CRITERION= .3897 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 35 COMPLETED. CUM ITER = 73
*** TIME = .626361E+07 TIME INC = 47939.8
*** RESPONSE EIGENVALUE = .9949E-05 OSCILLATION LIMIT = .4770
*** AUTO STEP TIME: NEXT TIME INC = 47940. UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.76 CRITERION= .3909
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8195E-01
HT FLOW CONVERGENCE VALUE= .5818E-01 CRITERION= .3890 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 36 COMPLETED. CUM ITER = 74
*** TIME = .631155E+07 TIME INC = 47939.8
*** RESPONSE EIGENVALUE = .1131E-04 OSCILLATION LIMIT = .5420

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 16:24:21 JUN 18, 1995 CP= 3709.400
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 31.90 CRITERION= .3903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9013E-01
HT FLOW CONVERGENCE VALUE= .6901E-01 CRITERION= .3897 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 75
*** TIME = .639045E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6419E-05 OSCILLATION LIMIT = .5064
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.28 CRITERION= .3910
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5787E-01 CRITERION= .3889 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 76

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*** TIME = .646934E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1309E-04    OSCILLATION LIMIT = 1.033
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.91    CRITERION= .3902
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8953E-01
    HT FLOW CONVERGENCE VALUE= .6453E-01    CRITERION= .3896    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 3 COMPLETED.    CUM ITER = 77
*** TIME = .654823E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9145E-05    OSCILLATION LIMIT = .7215
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.29    CRITERION= .3908
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5890E-01    CRITERION= .3888    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 4 COMPLETED.    CUM ITER = 78
*** TIME = .662713E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1092E-04    OSCILLATION LIMIT = .8614
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.92    CRITERION= .3901
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8934E-01
    HT FLOW CONVERGENCE VALUE= .6428E-01    CRITERION= .3895    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 5 COMPLETED.    CUM ITER = 79
*** TIME = .670602E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8867E-05    OSCILLATION LIMIT = .6996
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.30    CRITERION= .3907
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5903E-01    CRITERION= .3887    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 6 COMPLETED.    CUM ITER = 80
*** TIME = .678492E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1042E-04    OSCILLATION LIMIT = .8222
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.92    CRITERION= .3900
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8916E-01
    HT FLOW CONVERGENCE VALUE= .6406E-01    CRITERION= .3893    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 7 COMPLETED.    CUM ITER = 81
*** TIME = .686381E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8542E-05    OSCILLATION LIMIT = .6739
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.31    CRITERION= .3906
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5916E-01    CRITERION= .3886    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 8 COMPLETED.    CUM ITER = 82
*** TIME = .694270E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9951E-05    OSCILLATION LIMIT = .7851
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.93    CRITERION= .3899
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8898E-01
    HT FLOW CONVERGENCE VALUE= .6390E-01    CRITERION= .3892    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 9 COMPLETED.    CUM ITER = 83
*** TIME = .702160E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8240E-05    OSCILLATION LIMIT = .6501
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.33    CRITERION= .3905
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .5927E-01    CRITERION= .3885    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 10 COMPLETED. CUM ITER = 84
*** TIME = .710049E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9528E-05 OSCILLATION LIMIT = .7517
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.93 CRITERION= .3898
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8881E-01
HT FLOW CONVERGENCE VALUE= .6376E-01 CRITERION= .3891 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 11 COMPLETED. CUM ITER = 85
*** TIME = .717939E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7954E-05 OSCILLATION LIMIT = .6275
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.34 CRITERION= .3904
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5935E-01 CRITERION= .3884 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 12 COMPLETED. CUM ITER = 86
*** TIME = .725828E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9143E-05 OSCILLATION LIMIT = .7213
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .3897
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8865E-01
HT FLOW CONVERGENCE VALUE= .6361E-01 CRITERION= .3890 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 13 COMPLETED. CUM ITER = 87
*** TIME = .733717E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7682E-05 OSCILLATION LIMIT = .6061
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.35 CRITERION= .3903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5940E-01 CRITERION= .3883 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 14 COMPLETED. CUM ITER = 88
*** TIME = .741607E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8789E-05 OSCILLATION LIMIT = .6934
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.94 CRITERION= .3896
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8849E-01
HT FLOW CONVERGENCE VALUE= .6350E-01 CRITERION= .3889 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 15 COMPLETED. CUM ITER = 89
*** TIME = .749496E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7425E-05 OSCILLATION LIMIT = .5858
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.36 CRITERION= .3901
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
HT FLOW CONVERGENCE VALUE= .5947E-01 CRITERION= .3882 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 90
*** TIME = .757386E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8461E-05 OSCILLATION LIMIT = .6675
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.95 CRITERION= .3895
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8834E-01
HT FLOW CONVERGENCE VALUE= .6341E-01 CRITERION= .3888 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 91
*** TIME = .765275E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7182E-05 OSCILLATION LIMIT = .5666
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.37 CRITERION= .3900

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .5953E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 92
 *** TIME = .773164E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8156E-05 OSCILLATION LIMIT = .6434
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.96 CRITERION= .3894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8819E-01
 HT FLOW CONVERGENCE VALUE= .6332E-01 CRITERION= .3886 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 93
 *** TIME = .781054E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6953E-05 OSCILLATION LIMIT = .5485
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.38 CRITERION= .3899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6035E-01 CRITERION= .3880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 94
 *** TIME = .788943E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7871E-05 OSCILLATION LIMIT = .6210
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.96 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8804E-01
 HT FLOW CONVERGENCE VALUE= .6543E-01 CRITERION= .3885 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 95
 *** TIME = .796833E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6740E-05 OSCILLATION LIMIT = .5317
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.39 CRITERION= .3898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6191E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 96
 *** TIME = .804722E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7613E-05 OSCILLATION LIMIT = .6006
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.97 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8790E-01
 HT FLOW CONVERGENCE VALUE= .6567E-01 CRITERION= .3884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 97
 *** TIME = .812611E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6545E-05 OSCILLATION LIMIT = .5164
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.40 CRITERION= .3897
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6195E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 98
 *** TIME = .820501E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7365E-05 OSCILLATION LIMIT = .5811
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.98 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8777E-01
 HT FLOW CONVERGENCE VALUE= .6553E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 25 COMPLETED. CUM ITER = 99
 *** TIME = .828390E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6352E-05 OSCILLATION LIMIT = .5011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.41 CRITERION= .3896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6201E-01 CRITERION= .3877 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 26 COMPLETED. CUM ITER = 100
 *** TIME = .836280E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7130E-05 OSCILLATION LIMIT = .5625
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.98 CRITERION= .3890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8764E-01
 HT FLOW CONVERGENCE VALUE= .6551E-01 CRITERION= .3882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 27 COMPLETED. CUM ITER = 101
 *** TIME = .844169E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6167E-05 OSCILLATION LIMIT = .4865
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.43 CRITERION= .3895
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6214E-01 CRITERION= .3876 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 28 COMPLETED. CUM ITER = 102
 *** TIME = .852058E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6906E-05 OSCILLATION LIMIT = .5449
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.99 CRITERION= .3889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8751E-01
 HT FLOW CONVERGENCE VALUE= .6561E-01 CRITERION= .3881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 29 COMPLETED. CUM ITER = 103
 *** TIME = .859948E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5997E-05 OSCILLATION LIMIT = .4731
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.44 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6223E-01 CRITERION= .3875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 30 COMPLETED. CUM ITER = 104
 *** TIME = .867837E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6704E-05 OSCILLATION LIMIT = .5289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.99 CRITERION= .3888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8738E-01
 HT FLOW CONVERGENCE VALUE= .6553E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 31 COMPLETED. CUM ITER = 105
 *** TIME = .875727E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5837E-05 OSCILLATION LIMIT = .4605
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.45 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
 HT FLOW CONVERGENCE VALUE= .6226E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 32 COMPLETED. CUM ITER = 106
 *** TIME = .883616E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6508E-05 OSCILLATION LIMIT = .5134
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.00 CRITERION= .3887
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8726E-01
 HT FLOW CONVERGENCE VALUE= .6645E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 33 COMPLETED. CUM ITER = 107
 *** TIME = .891505E+07 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .5682E-05  OSCILLATION LIMIT = .4483
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.46      CRITERION= .3891
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6342E-01 CRITERION= .3873    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 34 COMPLETED. CUM ITER = 108
*** TIME = .899395E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6326E-05  OSCILLATION LIMIT = .4991
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01      CRITERION= .3886
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8714E-01
    HT FLOW CONVERGENCE VALUE= .6659E-01 CRITERION= .3877    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 35 COMPLETED. CUM ITER = 109
*** TIME = .907284E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5544E-05  OSCILLATION LIMIT = .4374
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.47      CRITERION= .3890
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6337E-01 CRITERION= .3872    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 36 COMPLETED. CUM ITER = 110
*** TIME = .915174E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6154E-05  OSCILLATION LIMIT = .4855
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.01      CRITERION= .3885
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8702E-01
    HT FLOW CONVERGENCE VALUE= .6652E-01 CRITERION= .3876    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 37 COMPLETED. CUM ITER = 111
*** TIME = .923063E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5405E-05  OSCILLATION LIMIT = .4264
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.48      CRITERION= .3889
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6348E-01 CRITERION= .3871    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 38 COMPLETED. CUM ITER = 112
*** TIME = .930952E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5988E-05  OSCILLATION LIMIT = .4725
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.02      CRITERION= .3884
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8691E-01
    HT FLOW CONVERGENCE VALUE= .6646E-01 CRITERION= .3875    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 39 COMPLETED. CUM ITER = 113
*** TIME = .938842E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5273E-05  OSCILLATION LIMIT = .4160
*** AUTO STEP TIME:  NEXT TIME INC = 78894.      UNCHANGED

    HT FLOW CONVERGENCE VALUE= 31.49      CRITERION= .3888
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8315E-01
    HT FLOW CONVERGENCE VALUE= .6296E-01 CRITERION= .3870    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 40 COMPLETED. CUM ITER = 114
*** TIME = .946731E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5833E-05  OSCILLATION LIMIT = .4602

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=MP 9000/7XX 17:07:52 JUN 18, 1995 CP= 5932.560

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6562E-01
 HT FLOW CONVERGENCE VALUE= .4982E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 115
 *** TIME = .954621E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6895E-05 OSCILLATION LIMIT = .5440
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.30 CRITERION= .3881
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4460E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 116
 *** TIME = .962510E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1149E-04 OSCILLATION LIMIT = .9067
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.84 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6536E-01
 HT FLOW CONVERGENCE VALUE= .4876E-01 CRITERION= .3873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 117
 *** TIME = .970399E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7939E-05 OSCILLATION LIMIT = .6263
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.31 CRITERION= .3880
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4540E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 4 COMPLETED. CUM ITER = 118
 *** TIME = .978289E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9466E-05 OSCILLATION LIMIT = .7468
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6525E-01
 HT FLOW CONVERGENCE VALUE= .4854E-01 CRITERION= .3872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 5 COMPLETED. CUM ITER = 119
 *** TIME = .986178E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7971E-05 OSCILLATION LIMIT = .6289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.31 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4546E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 6 COMPLETED. CUM ITER = 120
 *** TIME = .994068E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9150E-05 OSCILLATION LIMIT = .7219
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6515E-01
 HT FLOW CONVERGENCE VALUE= .4842E-01 CRITERION= .3871 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 7 COMPLETED. CUM ITER = 121
 *** TIME = .100196E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7767E-05 OSCILLATION LIMIT = .6128
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.32 CRITERION= .3878
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01

HT FLOW CONVERGENCE VALUE= .4551E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 8 COMPLETED. CUM ITER = 122
 *** TIME = .100985E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8870E-05 OSCILLATION LIMIT = .6998
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6505E-01
 HT FLOW CONVERGENCE VALUE= .4834E-01 CRITERION= .3870 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 9 COMPLETED. CUM ITER = 123
 *** TIME = .101774E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7578E-05 OSCILLATION LIMIT = .5978
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.33 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4556E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 10 COMPLETED. CUM ITER = 124
 *** TIME = .102563E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8612E-05 OSCILLATION LIMIT = .6794
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.85 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6495E-01
 HT FLOW CONVERGENCE VALUE= .4827E-01 CRITERION= .3869 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 11 COMPLETED. CUM ITER = 125
 *** TIME = .103351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7394E-05 OSCILLATION LIMIT = .5834
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.33 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4559E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 126
 *** TIME = .104140E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8371E-05 OSCILLATION LIMIT = .6604
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6486E-01
 HT FLOW CONVERGENCE VALUE= .4819E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 127
 *** TIME = .104929E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7217E-05 OSCILLATION LIMIT = .5694
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.34 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4562E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 14 COMPLETED. CUM ITER = 128
 *** TIME = .105718E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8146E-05 OSCILLATION LIMIT = .6426
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6477E-01
 HT FLOW CONVERGENCE VALUE= .4809E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 15 COMPLETED. CUM ITER = 129
 *** TIME = .106507E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7048E-05 OSCILLATION LIMIT = .5561
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.35 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4568E-01 CRITERION= .3862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 16 COMPLETED. CUM ITER = 130
 *** TIME = .107296E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7935E-05 OSCILLATION LIMIT = .6260
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.86 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6468E-01
 HT FLOW CONVERGENCE VALUE= .4811E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 17 COMPLETED. CUM ITER = 131
 *** TIME = .108085E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6886E-05 OSCILLATION LIMIT = .5433
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.35 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4571E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 18 COMPLETED. CUM ITER = 132
 *** TIME = .108874E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7734E-05 OSCILLATION LIMIT = .6102
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6460E-01
 HT FLOW CONVERGENCE VALUE= .4806E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 19 COMPLETED. CUM ITER = 133
 *** TIME = .109663E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6733E-05 OSCILLATION LIMIT = .5312
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.36 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4574E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 20 COMPLETED. CUM ITER = 134
 *** TIME = .110452E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7546E-05 OSCILLATION LIMIT = .5954
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6452E-01
 HT FLOW CONVERGENCE VALUE= .4801E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 21 COMPLETED. CUM ITER = 135
 *** TIME = .111241E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6586E-05 OSCILLATION LIMIT = .5196
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.37 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
 HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 22 COMPLETED. CUM ITER = 136
 *** TIME = .112030E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7367E-05 OSCILLATION LIMIT = .5812
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87 CRITERION= .3866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6444E-01
 HT FLOW CONVERGENCE VALUE= .4796E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 23 COMPLETED. CUM ITER = 137
 *** TIME = .112819E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6447E-05 OSCILLATION LIMIT = .5086

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*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.37    CRITERION= .3870
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4579E-01 CRITERION= .3858    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 24 COMPLETED.    CUM ITER = 138
*** TIME = .113608E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7199E-05    OSCILLATION LIMIT = .5679
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.87    CRITERION= .3865
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6436E-01
HT FLOW CONVERGENCE VALUE= .4790E-01 CRITERION= .3862    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 25 COMPLETED.    CUM ITER = 139
*** TIME = .114397E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6314E-05    OSCILLATION LIMIT = .4982
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.38    CRITERION= .3869
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3857    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 26 COMPLETED.    CUM ITER = 140
*** TIME = .115186E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7038E-05    OSCILLATION LIMIT = .5552
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88    CRITERION= .3864
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6429E-01
HT FLOW CONVERGENCE VALUE= .4781E-01 CRITERION= .3860    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 27 COMPLETED.    CUM ITER = 141
*** TIME = .115974E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6187E-05    OSCILLATION LIMIT = .4881
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.38    CRITERION= .3868
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4577E-01 CRITERION= .3856    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 28 COMPLETED.    CUM ITER = 142
*** TIME = .116763E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6884E-05    OSCILLATION LIMIT = .5431
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88    CRITERION= .3864
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6421E-01
HT FLOW CONVERGENCE VALUE= .4776E-01 CRITERION= .3859    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 29 COMPLETED.    CUM ITER = 143
*** TIME = .117552E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6066E-05    OSCILLATION LIMIT = .4786
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.39    CRITERION= .3867
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4578E-01 CRITERION= .3855    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 30 COMPLETED.    CUM ITER = 144
*** TIME = .118341E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6738E-05    OSCILLATION LIMIT = .5316
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.88    CRITERION= .3863
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6414E-01
HT FLOW CONVERGENCE VALUE= .4771E-01 CRITERION= .3858    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 31 COMPLETED.    CUM ITER = 145

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*** TIME = .119130E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5951E-05    OSCILLATION LIMIT = .4695
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.40    CRITERION= .3866
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4580E-01 CRITERION= .3854    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 32 COMPLETED. CUM ITER = 146
*** TIME = .119919E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6600E-05    OSCILLATION LIMIT = .5207
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3862
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6407E-01
    HT FLOW CONVERGENCE VALUE= .4768E-01 CRITERION= .3857    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 33 COMPLETED. CUM ITER = 147
*** TIME = .120708E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5841E-05    OSCILLATION LIMIT = .4608
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.40    CRITERION= .3865
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4581E-01 CRITERION= .3853    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 34 COMPLETED. CUM ITER = 148
*** TIME = .121497E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6468E-05    OSCILLATION LIMIT = .5103
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3861
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6401E-01
    HT FLOW CONVERGENCE VALUE= .4764E-01 CRITERION= .3856    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 35 COMPLETED. CUM ITER = 149
*** TIME = .122286E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5737E-05    OSCILLATION LIMIT = .4526
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.41    CRITERION= .3863
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4582E-01 CRITERION= .3852    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 36 COMPLETED. CUM ITER = 150
*** TIME = .123075E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6342E-05    OSCILLATION LIMIT = .5004
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.89    CRITERION= .3860
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6394E-01
    HT FLOW CONVERGENCE VALUE= .4758E-01 CRITERION= .3855    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 37 COMPLETED. CUM ITER = 151
*** TIME = .123864E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5637E-05    OSCILLATION LIMIT = .4447
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.42    CRITERION= .3862
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
    HT FLOW CONVERGENCE VALUE= .4582E-01 CRITERION= .3851    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 38 COMPLETED. CUM ITER = 152
*** TIME = .124653E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6223E-05    OSCILLATION LIMIT = .4910
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 23.90    CRITERION= .3859
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6388E-01
    HT FLOW CONVERGENCE VALUE= .4683E-01 CRITERION= .3854    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 39 COMPLETED. CUM ITER = 153
*** TIME = .125442E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5543E-05 OSCILLATION LIMIT = .4373
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 23.42 CRITERION= .3861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6181E-01
HT FLOW CONVERGENCE VALUE= .4413E-01 CRITERION= .3850 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 40 COMPLETED. CUM ITER = 154
*** TIME = .126231E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6111E-05 OSCILLATION LIMIT = .4821
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 17:45:02 JUN 18, 1995 CP= 8132.560
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 19.14 CRITERION= .3855
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5156E-01
HT FLOW CONVERGENCE VALUE= .3695E-01 CRITERION= .3853 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 155
*** TIME = .127020E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6499E-05 OSCILLATION LIMIT = .5127
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.66 CRITERION= .3858
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3406E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 156
*** TIME = .127809E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1009E-04 OSCILLATION LIMIT = .7962
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 19.14 CRITERION= .3854
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5141E-01
HT FLOW CONVERGENCE VALUE= .3638E-01 CRITERION= .3852 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 157
*** TIME = .128598E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7392E-05 OSCILLATION LIMIT = .5832
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.67 CRITERION= .3857
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3452E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 158
*** TIME = .129386E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8653E-05 OSCILLATION LIMIT = .6827
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3853
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5135E-01
HT FLOW CONVERGENCE VALUE= .3627E-01 CRITERION= .3851 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 159
*** TIME = .130175E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7454E-05 OSCILLATION LIMIT = .5881
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 18.67 CRITERION= .3856

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3457E-01 CRITERION= .3848 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 160
*** TIME = .130964E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8449E-05 OSCILLATION LIMIT = .6665
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3852
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5129E-01
HT FLOW CONVERGENCE VALUE= .3623E-01 CRITERION= .3850 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 161
*** TIME = .131753E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7326E-05 OSCILLATION LIMIT = .5780
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3855
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3461E-01 CRITERION= .3847 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 162
*** TIME = .132542E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8268E-05 OSCILLATION LIMIT = .6523
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3851
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5123E-01
HT FLOW CONVERGENCE VALUE= .3618E-01 CRITERION= .3850 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 163
*** TIME = .133331E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7206E-05 OSCILLATION LIMIT = .5685
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3854
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3463E-01 CRITERION= .3846 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 164
*** TIME = .134120E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8101E-05 OSCILLATION LIMIT = .6391
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3850
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5117E-01
HT FLOW CONVERGENCE VALUE= .3607E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 165
*** TIME = .134909E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7090E-05 OSCILLATION LIMIT = .5594
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.68 CRITERION= .3853
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
HT FLOW CONVERGENCE VALUE= .3465E-01 CRITERION= .3845 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 166
*** TIME = .135698E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7943E-05 OSCILLATION LIMIT = .6267
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3850
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5111E-01
HT FLOW CONVERGENCE VALUE= .3611E-01 CRITERION= .3848 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 167
*** TIME = .136487E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6973E-05 OSCILLATION LIMIT = .5501
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.69 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3467E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 168
 *** TIME = .137276E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7794E-05 OSCILLATION LIMIT = .6149
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.15 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5106E-01
 HT FLOW CONVERGENCE VALUE= .3608E-01 CRITERION= .3847 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 169
 *** TIME = .138065E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6865E-05 OSCILLATION LIMIT = .5416
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.69 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3471E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 170
 *** TIME = .138854E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7657E-05 OSCILLATION LIMIT = .6041
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5101E-01
 HT FLOW CONVERGENCE VALUE= .3591E-01 CRITERION= .3846 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 171
 *** TIME = .139643E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6763E-05 OSCILLATION LIMIT = .5335
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.70 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3456E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 18 COMPLETED. CUM ITER = 172
 *** TIME = .140432E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7528E-05 OSCILLATION LIMIT = .5939
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5096E-01
 HT FLOW CONVERGENCE VALUE= .3586E-01 CRITERION= .3845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 19 COMPLETED. CUM ITER = 173
 *** TIME = .141221E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6666E-05 OSCILLATION LIMIT = .5259
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.70 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3435E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 20 COMPLETED. CUM ITER = 174
 *** TIME = .142010E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7404E-05 OSCILLATION LIMIT = .5841
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5091E-01
 HT FLOW CONVERGENCE VALUE= .3528E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 21 COMPLETED. CUM ITER = 175
 *** TIME = .142798E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .6571E-05 OSCILLATION LIMIT = .5184
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3406E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 22 COMPLETED. CUM ITER = 176
 *** TIME = .143587E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7288E-05 OSCILLATION LIMIT = .5750
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5086E-01
 HT FLOW CONVERGENCE VALUE= .3525E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 23 COMPLETED. CUM ITER = 177
 *** TIME = .144376E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6484E-05 OSCILLATION LIMIT = .5115
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3407E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 24 COMPLETED. CUM ITER = 178
 *** TIME = .145165E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7175E-05 OSCILLATION LIMIT = .5660
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5081E-01
 HT FLOW CONVERGENCE VALUE= .3522E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 25 COMPLETED. CUM ITER = 179
 *** TIME = .145954E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6396E-05 OSCILLATION LIMIT = .5046
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.71 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3408E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 26 COMPLETED. CUM ITER = 180
 *** TIME = .146743E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7066E-05 OSCILLATION LIMIT = .5575
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.16 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5076E-01
 HT FLOW CONVERGENCE VALUE= .3520E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 27 COMPLETED. CUM ITER = 181
 *** TIME = .147532E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6312E-05 OSCILLATION LIMIT = .4980
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.72 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3409E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 28 COMPLETED. CUM ITER = 182
 *** TIME = .148321E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6962E-05 OSCILLATION LIMIT = .5493
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5072E-01
 HT FLOW CONVERGENCE VALUE= .3517E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 29 COMPLETED. CUM ITER = 183
 *** TIME = .149110E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6232E-05 OSCILLATION LIMIT = .4917
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.72 CRITERION= .3844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3408E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 30 COMPLETED. CUM ITER = 184
 *** TIME = .149899E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6863E-05 OSCILLATION LIMIT = .5414
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5068E-01
 HT FLOW CONVERGENCE VALUE= .3516E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 31 COMPLETED. CUM ITER = 185
 *** TIME = .150688E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6154E-05 OSCILLATION LIMIT = .4856
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.73 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3411E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 32 COMPLETED. CUM ITER = 186
 *** TIME = .151477E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6766E-05 OSCILLATION LIMIT = .5338
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5064E-01
 HT FLOW CONVERGENCE VALUE= .3513E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 33 COMPLETED. CUM ITER = 187
 *** TIME = .152266E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6081E-05 OSCILLATION LIMIT = .4797
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.73 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3411E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 34 COMPLETED. CUM ITER = 188
 *** TIME = .153055E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6675E-05 OSCILLATION LIMIT = .5266
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3839
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5060E-01
 HT FLOW CONVERGENCE VALUE= .3510E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 35 COMPLETED. CUM ITER = 189
 *** TIME = .153844E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6011E-05 OSCILLATION LIMIT = .4742
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.74 CRITERION= .3842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3412E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 8 SUBSTEP 36 COMPLETED. CUM ITER = 190
 *** TIME = .154633E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6588E-05 OSCILLATION LIMIT = .5198
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.17 CRITERION= .3839
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5056E-01

HT FLOW CONVERGENCE VALUE= .3508E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 37 COMPLETED. CUM ITER = 191
 *** TIME = .155421E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5944E-05 OSCILLATION LIMIT = .4689
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.74 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3413E-01 CRITERION= .3833 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 38 COMPLETED. CUM ITER = 192
 *** TIME = .156210E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6505E-05 OSCILLATION LIMIT = .5132
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.18 CRITERION= .3838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5053E-01
 HT FLOW CONVERGENCE VALUE= .3506E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 39 COMPLETED. CUM ITER = 193
 *** TIME = .156999E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5880E-05 OSCILLATION LIMIT = .4639
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.74 CRITERION= .3840
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4939E-01
 HT FLOW CONVERGENCE VALUE= .3415E-01 CRITERION= .3832 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 40 COMPLETED. CUM ITER = 194
 *** TIME = .157788E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6425E-05 OSCILLATION LIMIT = .5069

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:22:02 JUN 18, 1995 CP= 10328.790
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4220E-01
 HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 195
 *** TIME = .158577E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6589E-05 OSCILLATION LIMIT = .5198
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.50 CRITERION= .3837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2748E-01 CRITERION= .3831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 196
 *** TIME = .159366E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9831E-05 OSCILLATION LIMIT = .7756
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4213E-01
 HT FLOW CONVERGENCE VALUE= .2887E-01 CRITERION= .3833 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 197
 *** TIME = .160155E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7494E-05 OSCILLATION LIMIT = .5912
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.50 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2777E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 198
 *** TIME = .160944E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8620E-05 OSCILLATION LIMIT = .6800
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4210E-01
 HT FLOW CONVERGENCE VALUE= .2880E-01 CRITERION= .3832 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 199
 *** TIME = .161733E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7591E-05 OSCILLATION LIMIT = .5989
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2779E-01 CRITERION= .3829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 200
 *** TIME = .162522E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8480E-05 OSCILLATION LIMIT = .6690
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4206E-01
 HT FLOW CONVERGENCE VALUE= .2876E-01 CRITERION= .3831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 201
 *** TIME = .163311E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7512E-05 OSCILLATION LIMIT = .5926
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2780E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 202
 *** TIME = .164100E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8359E-05 OSCILLATION LIMIT = .6595
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3832
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4203E-01
 HT FLOW CONVERGENCE VALUE= .2872E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 203
 *** TIME = .164889E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7438E-05 OSCILLATION LIMIT = .5868
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.51 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 204
 *** TIME = .165678E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8247E-05 OSCILLATION LIMIT = .6506
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.94 CRITERION= .3831
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4200E-01
 HT FLOW CONVERGENCE VALUE= .2871E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 205
 *** TIME = .166467E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7365E-05 OSCILLATION LIMIT = .5811

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*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.51      CRITERION= .3833
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
  HT FLOW CONVERGENCE VALUE= .2785E-01 CRITERION= .3827 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 206
*** TIME = .167256E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8142E-05 OSCILLATION LIMIT = .6423
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.94      CRITERION= .3830
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4198E-01
  HT FLOW CONVERGENCE VALUE= .2869E-01 CRITERION= .3829 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 207
*** TIME = .168045E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7294E-05 OSCILLATION LIMIT = .5755
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.52      CRITERION= .3832
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
  HT FLOW CONVERGENCE VALUE= .2786E-01 CRITERION= .3826 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 208
*** TIME = .168833E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8043E-05 OSCILLATION LIMIT = .6346
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.94      CRITERION= .3829
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4195E-01
  HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3828 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 209
*** TIME = .169622E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7225E-05 OSCILLATION LIMIT = .5700
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.52      CRITERION= .3831
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
  HT FLOW CONVERGENCE VALUE= .2788E-01 CRITERION= .3825 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 210
*** TIME = .170411E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7950E-05 OSCILLATION LIMIT = .6272
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.94      CRITERION= .3828
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4192E-01
  HT FLOW CONVERGENCE VALUE= .2867E-01 CRITERION= .3827 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 211
*** TIME = .171200E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7160E-05 OSCILLATION LIMIT = .5649
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.52      CRITERION= .3830
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
  HT FLOW CONVERGENCE VALUE= .2790E-01 CRITERION= .3824 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 212
*** TIME = .171989E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7862E-05 OSCILLATION LIMIT = .6202
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 15.94      CRITERION= .3827
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4189E-01
  HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .3826 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 213

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*** TIME = .172778E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7096E-05    OSCILLATION LIMIT = .5599
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.53    CRITERION= .3829
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
    HT FLOW CONVERGENCE VALUE= .2791E-01 CRITERION= .3823    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 214
*** TIME = .173567E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7778E-05    OSCILLATION LIMIT = .6136
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.95    CRITERION= .3826
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4187E-01
    HT FLOW CONVERGENCE VALUE= .2864E-01 CRITERION= .3825    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 215
*** TIME = .174356E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7035E-05    OSCILLATION LIMIT = .5550
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.53    CRITERION= .3828
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
    HT FLOW CONVERGENCE VALUE= .2792E-01 CRITERION= .3822    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 216
*** TIME = .175145E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7696E-05    OSCILLATION LIMIT = .6072
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.95    CRITERION= .3825
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4185E-01
    HT FLOW CONVERGENCE VALUE= .2862E-01 CRITERION= .3824    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 23 COMPLETED. CUM ITER = 217
*** TIME = .175934E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6976E-05    OSCILLATION LIMIT = .5504
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.53    CRITERION= .3827
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
    HT FLOW CONVERGENCE VALUE= .2793E-01 CRITERION= .3821    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 24 COMPLETED. CUM ITER = 218
*** TIME = .176723E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7619E-05    OSCILLATION LIMIT = .6011
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.95    CRITERION= .3825
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4183E-01
    HT FLOW CONVERGENCE VALUE= .2862E-01 CRITERION= .3823    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 25 COMPLETED. CUM ITER = 219
*** TIME = .177512E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6920E-05    OSCILLATION LIMIT = .5459
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.54    CRITERION= .3826
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
    HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3820    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 26 COMPLETED. CUM ITER = 220
*** TIME = .178301E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7545E-05    OSCILLATION LIMIT = .5953
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.95    CRITERION= .3824
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4182E-01
    HT FLOW CONVERGENCE VALUE= .2860E-01 CRITERION= .3822    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 27 COMPLETED. CUM ITER = 221
*** TIME = .179090E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6866E-05 OSCILLATION LIMIT = .5417
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.54 CRITERION= .3825
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 28 COMPLETED. CUM ITER = 222
*** TIME = .179879E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7474E-05 OSCILLATION LIMIT = .5897
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4180E-01
HT FLOW CONVERGENCE VALUE= .2858E-01 CRITERION= .3821 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 29 COMPLETED. CUM ITER = 223
*** TIME = .180668E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6814E-05 OSCILLATION LIMIT = .5376
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.54 CRITERION= .3824
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2797E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 30 COMPLETED. CUM ITER = 224
*** TIME = .181457E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7406E-05 OSCILLATION LIMIT = .5843
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3822
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4178E-01
HT FLOW CONVERGENCE VALUE= .2847E-01 CRITERION= .3820 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 31 COMPLETED. CUM ITER = 225
*** TIME = .182245E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6765E-05 OSCILLATION LIMIT = .5338
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3818 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 32 COMPLETED. CUM ITER = 226
*** TIME = .183034E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7342E-05 OSCILLATION LIMIT = .5792
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3821
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4176E-01
HT FLOW CONVERGENCE VALUE= .2832E-01 CRITERION= .3819 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 33 COMPLETED. CUM ITER = 227
*** TIME = .183823E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6721E-05 OSCILLATION LIMIT = .5302
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3823
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
HT FLOW CONVERGENCE VALUE= .2769E-01 CRITERION= .3817 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 34 COMPLETED. CUM ITER = 228
*** TIME = .184612E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7283E-05 OSCILLATION LIMIT = .5745
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.95 CRITERION= .3820

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4175E-01
 HT FLOW CONVERGENCE VALUE= .2826E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 35 COMPLETED. CUM ITER = 229
 *** TIME = .185401E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6680E-05 OSCILLATION LIMIT = .5270
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3822
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2770E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 36 COMPLETED. CUM ITER = 230
 *** TIME = .186190E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7223E-05 OSCILLATION LIMIT = .5698
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.96 CRITERION= .3819
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4173E-01
 HT FLOW CONVERGENCE VALUE= .2825E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 37 COMPLETED. CUM ITER = 231
 *** TIME = .186979E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6635E-05 OSCILLATION LIMIT = .5235
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.55 CRITERION= .3821
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 38 COMPLETED. CUM ITER = 232
 *** TIME = .187768E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7165E-05 OSCILLATION LIMIT = .5652
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.96 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4171E-01
 HT FLOW CONVERGENCE VALUE= .2824E-01 CRITERION= .3817 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 39 COMPLETED. CUM ITER = 233
 *** TIME = .188557E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6593E-05 OSCILLATION LIMIT = .5202
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.56 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4100E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 40 COMPLETED. CUM ITER = 234
 *** TIME = .189346E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7108E-05 OSCILLATION LIMIT = .5608

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 18:59:05 JUN 18, 1995 CP= 12526.640
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3599E-01
 HT FLOW CONVERGENCE VALUE= .2436E-01 CRITERION= .3816 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 1 COMPLETED. CUM ITER = 235
 *** TIME = .190135E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7116E-05 OSCILLATION LIMIT = .5614
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2328E-01 CRITERION= .3813 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 2 COMPLETED. CUM ITER = 236
 *** TIME = .190924E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9849E-05 OSCILLATION LIMIT = .7770
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3596E-01
 HT FLOW CONVERGENCE VALUE= .2412E-01 CRITERION= .3815 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 3 COMPLETED. CUM ITER = 237
 *** TIME = .191713E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7927E-05 OSCILLATION LIMIT = .6254
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2346E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 4 COMPLETED. CUM ITER = 238
 *** TIME = .192502E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8885E-05 OSCILLATION LIMIT = .7010
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3594E-01
 HT FLOW CONVERGENCE VALUE= .2406E-01 CRITERION= .3814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 5 COMPLETED. CUM ITER = 239
 *** TIME = .193291E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8032E-05 OSCILLATION LIMIT = .6337
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.35 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2347E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 240
 *** TIME = .194080E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8789E-05 OSCILLATION LIMIT = .6934
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3593E-01
 HT FLOW CONVERGENCE VALUE= .2403E-01 CRITERION= .3813 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 241
 *** TIME = .194868E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7984E-05 OSCILLATION LIMIT = .6299
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2348E-01 CRITERION= .3811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 242
 *** TIME = .195657E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8708E-05 OSCILLATION LIMIT = .6870
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3591E-01
 HT FLOW CONVERGENCE VALUE= .2401E-01 CRITERION= .3812 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 243
 *** TIME = .196446E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .7940E-05 OSCILLATION LIMIT = .6264
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2348E-01 CRITERION= .3810 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 10 COMPLETED. CUM ITER = 244
 *** TIME = .197235E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8633E-05 OSCILLATION LIMIT = .6811
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.75 CRITERION= .3812
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3590E-01
 HT FLOW CONVERGENCE VALUE= .2399E-01 CRITERION= .3811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 11 COMPLETED. CUM ITER = 245
 *** TIME = .198024E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7896E-05 OSCILLATION LIMIT = .6230
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2349E-01 CRITERION= .3809 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 12 COMPLETED. CUM ITER = 246
 *** TIME = .198813E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8562E-05 OSCILLATION LIMIT = .6755
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3588E-01
 HT FLOW CONVERGENCE VALUE= .2398E-01 CRITERION= .3810 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 13 COMPLETED. CUM ITER = 247
 *** TIME = .199602E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7852E-05 OSCILLATION LIMIT = .6195
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.36 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2350E-01 CRITERION= .3808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 14 COMPLETED. CUM ITER = 248
 *** TIME = .200391E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8496E-05 OSCILLATION LIMIT = .6703
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3587E-01
 HT FLOW CONVERGENCE VALUE= .2397E-01 CRITERION= .3810 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 15 COMPLETED. CUM ITER = 249
 *** TIME = .201180E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7809E-05 OSCILLATION LIMIT = .6161
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3812
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2350E-01 CRITERION= .3807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 16 COMPLETED. CUM ITER = 250
 *** TIME = .201969E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8433E-05 OSCILLATION LIMIT = .6653
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3585E-01
 HT FLOW CONVERGENCE VALUE= .2394E-01 CRITERION= .3809 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 17 COMPLETED. CUM ITER = 251
 *** TIME = .202758E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7767E-05 OSCILLATION LIMIT = .6128
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2351E-01 CRITERION= .3806 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 18 COMPLETED. CUM ITER = 252
 *** TIME = .203547E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8372E-05 OSCILLATION LIMIT = .6605
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3809
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3584E-01
 HT FLOW CONVERGENCE VALUE= .2395E-01 CRITERION= .3808 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 253
 *** TIME = .204336E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7723E-05 OSCILLATION LIMIT = .6093
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2352E-01 CRITERION= .3805 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 254
 *** TIME = .205125E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8313E-05 OSCILLATION LIMIT = .6559
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3583E-01
 HT FLOW CONVERGENCE VALUE= .2380E-01 CRITERION= .3807 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 255
 *** TIME = .205914E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7686E-05 OSCILLATION LIMIT = .6064
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.37 CRITERION= .3809
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2339E-01 CRITERION= .3805 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 256
 *** TIME = .206703E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8261E-05 OSCILLATION LIMIT = .6517
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3582E-01
 HT FLOW CONVERGENCE VALUE= .2379E-01 CRITERION= .3806 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 257
 *** TIME = .207492E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7652E-05 OSCILLATION LIMIT = .6037
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3804 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 258
 *** TIME = .208280E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8208E-05 OSCILLATION LIMIT = .6476
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3580E-01

HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 25 COMPLETED. CUM ITER = 259
 *** TIME = .209069E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7616E-05 OSCILLATION LIMIT = .6008
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3808
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 26 COMPLETED. CUM ITER = 260
 *** TIME = .209858E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8157E-05 OSCILLATION LIMIT = .6436
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3805
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3579E-01
 HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3804 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 27 COMPLETED. CUM ITER = 261
 *** TIME = .210647E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7580E-05 OSCILLATION LIMIT = .5980
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3807
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2342E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 28 COMPLETED. CUM ITER = 262
 *** TIME = .211436E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8108E-05 OSCILLATION LIMIT = .6397
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3578E-01
 HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 29 COMPLETED. CUM ITER = 263
 *** TIME = .212225E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7548E-05 OSCILLATION LIMIT = .5955
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 30 COMPLETED. CUM ITER = 264
 *** TIME = .213014E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8061E-05 OSCILLATION LIMIT = .6360
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3577E-01
 HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 31 COMPLETED. CUM ITER = 265
 *** TIME = .213803E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7515E-05 OSCILLATION LIMIT = .5929
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.38 CRITERION= .3805
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3800 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 32 COMPLETED. CUM ITER = 266
 *** TIME = .214592E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8015E-05 OSCILLATION LIMIT = .6324
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3803
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3576E-01
 HT FLOW CONVERGENCE VALUE= .2376E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 33 COMPLETED. CUM ITER = 267
 *** TIME = .215381E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7484E-05 OSCILLATION LIMIT = .5904
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 34 COMPLETED. CUM ITER = 268
 *** TIME = .216170E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7971E-05 OSCILLATION LIMIT = .6289
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.76 CRITERION= .3802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3574E-01
 HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .3801 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 35 COMPLETED. CUM ITER = 269
 *** TIME = .216959E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7453E-05 OSCILLATION LIMIT = .5880
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3803
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 36 COMPLETED. CUM ITER = 270
 *** TIME = .217748E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7928E-05 OSCILLATION LIMIT = .6255
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.77 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3573E-01
 HT FLOW CONVERGENCE VALUE= .2371E-01 CRITERION= .3800 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 37 COMPLETED. CUM ITER = 271
 *** TIME = .218537E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7425E-05 OSCILLATION LIMIT = .5858
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2340E-01 CRITERION= .3798 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 38 COMPLETED. CUM ITER = 272
 *** TIME = .219326E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7887E-05 OSCILLATION LIMIT = .6223
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.77 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3572E-01
 HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 39 COMPLETED. CUM ITER = 273
 *** TIME = .220115E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7397E-05 OSCILLATION LIMIT = .5835
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.39 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3524E-01
 HT FLOW CONVERGENCE VALUE= .2338E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 40 COMPLETED. CUM ITER = 274
 *** TIME = .220904E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7847E-05 OSCILLATION LIMIT = .6191

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 19:36:13 JUN 18, 1995 CP= 14725.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3140E-01
 HT FLOW CONVERGENCE VALUE= .2076E-01 CRITERION= .3798 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 275
 *** TIME = .221692E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7947E-05 OSCILLATION LIMIT = .6270
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.70 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2006E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 276
 *** TIME = .222481E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1050E-04 OSCILLATION LIMIT = .8285
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3138E-01
 HT FLOW CONVERGENCE VALUE= .2058E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 277
 *** TIME = .223270E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8778E-05 OSCILLATION LIMIT = .6925
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2019E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 278
 *** TIME = .224059E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9617E-05 OSCILLATION LIMIT = .7587
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3137E-01
 HT FLOW CONVERGENCE VALUE= .2053E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 279
 *** TIME = .224848E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8897E-05 OSCILLATION LIMIT = .7019
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.71 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2020E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 280
 *** TIME = .225637E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9545E-05 OSCILLATION LIMIT = .7531
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3136E-01
 HT FLOW CONVERGENCE VALUE= .2053E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 281

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*** TIME = .226426E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8866E-05    OSCILLATION LIMIT = .6994
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.71    CRITERION= .3797
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
    HT FLOW CONVERGENCE VALUE= .2021E-01 CRITERION= .3794    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 282
*** TIME = .227215E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9486E-05    OSCILLATION LIMIT = .7484
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.08    CRITERION= .3795
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3135E-01
    HT FLOW CONVERGENCE VALUE= .2051E-01 CRITERION= .3795    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 283
*** TIME = .228004E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8839E-05    OSCILLATION LIMIT = .6973
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.71    CRITERION= .3797
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
    HT FLOW CONVERGENCE VALUE= .2021E-01 CRITERION= .3793    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 284
*** TIME = .228793E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9431E-05    OSCILLATION LIMIT = .7441
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.08    CRITERION= .3795
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3134E-01
    HT FLOW CONVERGENCE VALUE= .2051E-01 CRITERION= .3794    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 285
*** TIME = .229582E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8811E-05    OSCILLATION LIMIT = .6951
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.71    CRITERION= .3796
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
    HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3792    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 286
*** TIME = .230371E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9381E-05    OSCILLATION LIMIT = .7401
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.08    CRITERION= .3794
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3133E-01
    HT FLOW CONVERGENCE VALUE= .2050E-01 CRITERION= .3793    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 287
*** TIME = .231160E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8783E-05    OSCILLATION LIMIT = .6929
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 11.72    CRITERION= .3795
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
    HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3791    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 288
*** TIME = .231949E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9334E-05    OSCILLATION LIMIT = .7364
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 12.08    CRITERION= .3793
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3132E-01
    HT FLOW CONVERGENCE VALUE= .2048E-01 CRITERION= .3792    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 289
*** TIME = .232738E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8755E-05 OSCILLATION LIMIT = .6907
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3794
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 290
*** TIME = .233527E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9290E-05 OSCILLATION LIMIT = .7329
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3792
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3131E-01
HT FLOW CONVERGENCE VALUE= .2048E-01 CRITERION= .3791 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 291
*** TIME = .234315E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8728E-05 OSCILLATION LIMIT = .6886
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3793
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3789 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 292
*** TIME = .235104E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9247E-05 OSCILLATION LIMIT = .7295
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3130E-01
HT FLOW CONVERGENCE VALUE= .2047E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 293
*** TIME = .235893E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8701E-05 OSCILLATION LIMIT = .6865
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3792
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3788 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 294
*** TIME = .236682E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9205E-05 OSCILLATION LIMIT = .7262
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3790
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3129E-01
HT FLOW CONVERGENCE VALUE= .2045E-01 CRITERION= .3790 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 295
*** TIME = .237471E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .8675E-05 OSCILLATION LIMIT = .6844
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.72 CRITERION= .3791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3788 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 296
*** TIME = .238260E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .9165E-05 OSCILLATION LIMIT = .7231
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.08 CRITERION= .3790

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3129E-01
 HT FLOW CONVERGENCE VALUE= .2044E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 297
 *** TIME = .239049E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8649E-05 OSCILLATION LIMIT = .6824
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 298
 *** TIME = .239838E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9127E-05 OSCILLATION LIMIT = .7200
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3128E-01
 HT FLOW CONVERGENCE VALUE= .2044E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 299
 *** TIME = .240627E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = .6804
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 300
 *** TIME = .241416E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9090E-05 OSCILLATION LIMIT = .7171
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3128E-01
 HT FLOW CONVERGENCE VALUE= .2043E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 301
 *** TIME = .242205E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8600E-05 OSCILLATION LIMIT = .6785
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 302
 *** TIME = .242994E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9054E-05 OSCILLATION LIMIT = .7143
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3127E-01
 HT FLOW CONVERGENCE VALUE= .2042E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 29 COMPLETED. CUM ITER = 303
 *** TIME = .243783E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8578E-05 OSCILLATION LIMIT = .6767
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3788
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 30 COMPLETED. CUM ITER = 304
 *** TIME = .244572E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9019E-05 OSCILLATION LIMIT = .7115
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3127E-01
 HT FLOW CONVERGENCE VALUE= .2041E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 31 COMPLETED. CUM ITER = 305
 *** TIME = .245361E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8555E-05 OSCILLATION LIMIT = .6749
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3787
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 32 COMPLETED. CUM ITER = 306
 *** TIME = .246150E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8985E-05 OSCILLATION LIMIT = .7089
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2040E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 33 COMPLETED. CUM ITER = 307
 *** TIME = .246939E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8533E-05 OSCILLATION LIMIT = .6732
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.73 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 34 COMPLETED. CUM ITER = 308
 *** TIME = .247727E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8952E-05 OSCILLATION LIMIT = .7063
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2039E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 35 COMPLETED. CUM ITER = 309
 *** TIME = .248516E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8512E-05 OSCILLATION LIMIT = .6715
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2023E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 36 COMPLETED. CUM ITER = 310
 *** TIME = .249305E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8919E-05 OSCILLATION LIMIT = .7037
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3126E-01
 HT FLOW CONVERGENCE VALUE= .2039E-01 CRITERION= .3783 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 37 COMPLETED. CUM ITER = 311
 *** TIME = .250094E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8491E-05 OSCILLATION LIMIT = .6699
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3781 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 38 COMPLETED. CUM ITER = 312
 *** TIME = .250833E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .8888E-05 OSCILLATION LIMIT = .7012
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 12.09 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3125E-01
 HT FLOW CONVERGENCE VALUE= .2037E-01 CRITERION= .3782 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 39 COMPLETED. CUM ITER = 313
 *** TIME = .251672E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8471E-05 OSCILLATION LIMIT = .6683
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.74 CRITERION= .3784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3089E-01
 HT FLOW CONVERGENCE VALUE= .2022E-01 CRITERION= .3780 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 40 COMPLETED. CUM ITER = 314
 *** TIME = .252461E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8859E-05 OSCILLATION LIMIT = .6989

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:13:19 JUN 18, 1995 CP= 16926.190
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2773E-01
 HT FLOW CONVERGENCE VALUE= .1803E-01 CRITERION= .3781 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 1 COMPLETED. CUM ITER = 315
 *** TIME = .253250E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9101E-05 OSCILLATION LIMIT = .7180
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1756E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 2 COMPLETED. CUM ITER = 316
 *** TIME = .254039E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1155E-04 OSCILLATION LIMIT = .9114
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2772E-01
 HT FLOW CONVERGENCE VALUE= .1789E-01 CRITERION= .3780 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 3 COMPLETED. CUM ITER = 317
 *** TIME = .254828E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9959E-05 OSCILLATION LIMIT = .7857
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1766E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 4 COMPLETED. CUM ITER = 318
 *** TIME = .255617E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1070E-04 OSCILLATION LIMIT = .8444
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2772E-01
 HT FLOW CONVERGENCE VALUE= .1786E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 319
 *** TIME = .256406E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1009E-04 OSCILLATION LIMIT = .7960
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1767E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 320
 *** TIME = .257195E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1065E-04 OSCILLATION LIMIT = .8399
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2771E-01
 HT FLOW CONVERGENCE VALUE= .1785E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 321
 *** TIME = .257984E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1007E-04 OSCILLATION LIMIT = .7945
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1767E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 322
 *** TIME = .258773E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1060E-04 OSCILLATION LIMIT = .8363
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2771E-01
 HT FLOW CONVERGENCE VALUE= .1784E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 323
 *** TIME = .259562E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1005E-04 OSCILLATION LIMIT = .7931
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.38 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 324
 *** TIME = .260351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1056E-04 OSCILLATION LIMIT = .8330
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1783E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 325
 *** TIME = .261139E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1003E-04 OSCILLATION LIMIT = .7917
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 326
 *** TIME = .261928E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1052E-04 OSCILLATION LIMIT = .8299
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01

HT FLOW CONVERGENCE VALUE= .1782E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 327
 *** TIME = .262717E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1002E-04 OSCILLATION LIMIT = .7902
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 328
 *** TIME = .263506E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = .8271
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2770E-01
 HT FLOW CONVERGENCE VALUE= .1782E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 329
 *** TIME = .264295E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9995E-05 OSCILLATION LIMIT = .7886
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 330
 *** TIME = .265084E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1045E-04 OSCILLATION LIMIT = .8243
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2769E-01
 HT FLOW CONVERGENCE VALUE= .1781E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 331
 *** TIME = .265873E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9975E-05 OSCILLATION LIMIT = .7870
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 332
 *** TIME = .266662E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1041E-04 OSCILLATION LIMIT = .8217
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2769E-01
 HT FLOW CONVERGENCE VALUE= .1780E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 333
 *** TIME = .267451E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9955E-05 OSCILLATION LIMIT = .7854
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3775
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 334
 *** TIME = .268240E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1038E-04 OSCILLATION LIMIT = .8191
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 21 COMPLETED. CUM ITER = 335
 *** TIME = .269029E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9936E-05 OSCILLATION LIMIT = .7839
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3774
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 22 COMPLETED. CUM ITER = 336
 *** TIME = .269818E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1035E-04 OSCILLATION LIMIT = .8166
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 23 COMPLETED. CUM ITER = 337
 *** TIME = .270607E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9917E-05 OSCILLATION LIMIT = .7824
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.39 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 24 COMPLETED. CUM ITER = 338
 *** TIME = .271396E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1032E-04 OSCILLATION LIMIT = .8143
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.73 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2768E-01
 HT FLOW CONVERGENCE VALUE= .1779E-01 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 25 COMPLETED. CUM ITER = 339
 *** TIME = .272185E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9898E-05 OSCILLATION LIMIT = .7809
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 26 COMPLETED. CUM ITER = 340
 *** TIME = .272974E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1029E-04 OSCILLATION LIMIT = .8119
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1778E-01 CRITERION= .3770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 27 COMPLETED. CUM ITER = 341
 *** TIME = .273762E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9879E-05 OSCILLATION LIMIT = .7794
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 28 COMPLETED. CUM ITER = 342
 *** TIME = .274551E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1026E-04 OSCILLATION LIMIT = .8096

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1777E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 29 COMPLETED. CUM ITER = 343
 *** TIME = .275340E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9861E-05 OSCILLATION LIMIT = .7780
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3768 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 30 COMPLETED. CUM ITER = 344
 *** TIME = .276129E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1023E-04 OSCILLATION LIMIT = .8074
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2767E-01
 HT FLOW CONVERGENCE VALUE= .1776E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 31 COMPLETED. CUM ITER = 345
 *** TIME = .276918E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9844E-05 OSCILLATION LIMIT = .7766
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 32 COMPLETED. CUM ITER = 346
 *** TIME = .277707E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1021E-04 OSCILLATION LIMIT = .8052
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
 HT FLOW CONVERGENCE VALUE= .1776E-01 CRITERION= .3768 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 33 COMPLETED. CUM ITER = 347
 *** TIME = .278496E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9826E-05 OSCILLATION LIMIT = .7752
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 34 COMPLETED. CUM ITER = 348
 *** TIME = .279285E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1018E-04 OSCILLATION LIMIT = .8031
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
 HT FLOW CONVERGENCE VALUE= .1775E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 35 COMPLETED. CUM ITER = 349
 *** TIME = .280074E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9809E-05 OSCILLATION LIMIT = .7739
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1768E-01 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 36 COMPLETED. CUM ITER = 350

*** TIME = .280863E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1015E-04 OSCILLATION LIMIT = .8011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3767
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2766E-01
 HT FLOW CONVERGENCE VALUE= .1769E-01 CRITERION= .3766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 37 COMPLETED. CUM ITER = 351
 *** TIME = .281652E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9794E-05 OSCILLATION LIMIT = .7727
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.40 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1762E-01 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 38 COMPLETED. CUM ITER = 352
 *** TIME = .282441E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1013E-04 OSCILLATION LIMIT = .7991
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.74 CRITERION= .3766
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2765E-01
 HT FLOW CONVERGENCE VALUE= .1772E-01 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 39 COMPLETED. CUM ITER = 353
 *** TIME = .283230E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9776E-05 OSCILLATION LIMIT = .7713
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 10.41 CRITERION= .3767
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2736E-01
 HT FLOW CONVERGENCE VALUE= .1765E-01 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 40 COMPLETED. CUM ITER = 354
 *** TIME = .284019E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1010E-04 OSCILLATION LIMIT = .7969
 Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM FROM .31558E+08 TO .28402E+09 BY .31558E+08
 TIME= .31558E+08

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 6169.91289 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11.

LOAD LABELS = TEMP
 VALUES = 114.16 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 115.23 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 117.89 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 19125.730 TIME= 20:50:26
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:50:26 JUN 18, 1995 CP= 19125.730
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
TIME AT END OF THE LOAD STEP.31558E+08
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLSUSE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 9.669 CRITERION= .3765
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2492E-01
HT FLOW CONVERGENCE VALUE= .1589E-01 CRITERION= .3764 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 355
*** TIME = .284808E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = .8265
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.337 CRITERION= .3766
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .3763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 356
*** TIME = .285597E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1273E-04 OSCILLATION LIMIT = 1.004
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3764
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2492E-01

HT FLOW CONVERGENCE VALUE= .1576E-01 CRITERION= .3764 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 357
 *** TIME = .286386E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1131E-04 OSCILLATION LIMIT = .8920
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.338 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 358
 *** TIME = .287174E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1195E-04 OSCILLATION LIMIT = .9426
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3763 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 359
 *** TIME = .287963E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1144E-04 OSCILLATION LIMIT = .9022
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.340 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 360
 *** TIME = .288752E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1190E-04 OSCILLATION LIMIT = .9387
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 361
 *** TIME = .289541E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1142E-04 OSCILLATION LIMIT = .9011
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.341 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 8 COMPLETED. CUM ITER = 362
 *** TIME = .290330E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1186E-04 OSCILLATION LIMIT = .9358
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.670 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2491E-01
 HT FLOW CONVERGENCE VALUE= .1572E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 9 COMPLETED. CUM ITER = 363
 *** TIME = .291119E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1141E-04 OSCILLATION LIMIT = .9002
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.342 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 10 COMPLETED. CUM ITER = 364
 *** TIME = .291908E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1183E-04 OSCILLATION LIMIT = .9331
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 11 COMPLETED. CUM ITER = 365
 *** TIME = .292697E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1140E-04 OSCILLATION LIMIT = .8991
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.343 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 12 COMPLETED. CUM ITER = 366
 *** TIME = .293486E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1180E-04 OSCILLATION LIMIT = .9306
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 13 COMPLETED. CUM ITER = 367
 *** TIME = .294275E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1138E-04 OSCILLATION LIMIT = .8979
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.344 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 14 COMPLETED. CUM ITER = 368
 *** TIME = .295064E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1177E-04 OSCILLATION LIMIT = .9282
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.671 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1570E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 15 COMPLETED. CUM ITER = 369
 *** TIME = .295853E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1137E-04 OSCILLATION LIMIT = .8966
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.346 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1564E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 370
 *** TIME = .296642E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1174E-04 OSCILLATION LIMIT = .9259
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.672 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2490E-01
 HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 371
 *** TIME = .297431E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1135E-04 OSCILLATION LIMIT = .8954
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.347 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
 HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 18 COMPLETED. CUM ITER = 372
 *** TIME = .298220E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1171E-04 OSCILLATION LIMIT = .9238

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*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.672      CRITERION= .3758
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
  HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3757 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 19 COMPLETED. CUM ITER = 373
*** TIME = .299009E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1133E-04 OSCILLATION LIMIT = .8941
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.348      CRITERION= .3758
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
  HT FLOW CONVERGENCE VALUE= .1565E-01 CRITERION= .3756 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 20 COMPLETED. CUM ITER = 374
*** TIME = .299798E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1168E-04 OSCILLATION LIMIT = .9217
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.672      CRITERION= .3757
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
  HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3756 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 21 COMPLETED. CUM ITER = 375
*** TIME = .300586E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1132E-04 OSCILLATION LIMIT = .8928
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.349      CRITERION= .3758
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
  HT FLOW CONVERGENCE VALUE= .1569E-01 CRITERION= .3755 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 22 COMPLETED. CUM ITER = 376
*** TIME = .301375E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1166E-04 OSCILLATION LIMIT = .9196
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.672      CRITERION= .3756
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
  HT FLOW CONVERGENCE VALUE= .1575E-01 CRITERION= .3756 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 23 COMPLETED. CUM ITER = 377
*** TIME = .302164E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1130E-04 OSCILLATION LIMIT = .8916
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.351      CRITERION= .3757
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
  HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3754 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 24 COMPLETED. CUM ITER = 378
*** TIME = .302953E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1163E-04 OSCILLATION LIMIT = .9175
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.673      CRITERION= .3755
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2489E-01
  HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3755 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 379
*** TIME = .303742E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1128E-04 OSCILLATION LIMIT = .8903
*** AUTO STEP TIME: NEXT TIME INC = 78894.      UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.352      CRITERION= .3756
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
  HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3753 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 26 COMPLETED. CUM ITER = 380

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*** TIME = .304531E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1160E-04    OSCILLATION LIMIT = .9156
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.673    CRITERION= .3754
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
    HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .3754    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 27 COMPLETED. CUM ITER = 381
*** TIME = .305320E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1127E-04    OSCILLATION LIMIT = .8890
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.353    CRITERION= .3755
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
    HT FLOW CONVERGENCE VALUE= .1571E-01 CRITERION= .3752    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 28 COMPLETED. CUM ITER = 382
*** TIME = .306109E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1158E-04    OSCILLATION LIMIT = .9136
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.673    CRITERION= .3754
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
    HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .3753    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 29 COMPLETED. CUM ITER = 383
*** TIME = .306898E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1125E-04    OSCILLATION LIMIT = .8878
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.354    CRITERION= .3754
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
    HT FLOW CONVERGENCE VALUE= .1579E-01 CRITERION= .3752    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 30 COMPLETED. CUM ITER = 384
*** TIME = .307687E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1156E-04    OSCILLATION LIMIT = .9118
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.674    CRITERION= .3753
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
    HT FLOW CONVERGENCE VALUE= .1607E-01 CRITERION= .3752    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 31 COMPLETED. CUM ITER = 385
*** TIME = .308476E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1124E-04    OSCILLATION LIMIT = .8866
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.355    CRITERION= .3753
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
    HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3751    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 32 COMPLETED. CUM ITER = 386
*** TIME = .309265E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1153E-04    OSCILLATION LIMIT = .9098
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.674    CRITERION= .3752
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2488E-01
    HT FLOW CONVERGENCE VALUE= .1606E-01 CRITERION= .3751    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 33 COMPLETED. CUM ITER = 387
*** TIME = .310054E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1122E-04    OSCILLATION LIMIT = .8853
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.357    CRITERION= .3753
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
    HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3750    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 34 COMPLETED. CUM ITER = 388
*** TIME = .310843E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1151E-04 OSCILLATION LIMIT = .9080
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 35 COMPLETED. CUM ITER = 389
*** TIME = .311632E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1121E-04 OSCILLATION LIMIT = .8842
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.358 CRITERION= .3752
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 36 COMPLETED. CUM ITER = 390
*** TIME = .312421E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1149E-04 OSCILLATION LIMIT = .9062
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.674 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 37 COMPLETED. CUM ITER = 391
*** TIME = .313209E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1119E-04 OSCILLATION LIMIT = .8831
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.359 CRITERION= .3751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1603E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 38 COMPLETED. CUM ITER = 392
*** TIME = .313998E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1146E-04 OSCILLATION LIMIT = .9045
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.675 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2487E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 39 COMPLETED. CUM ITER = 393
*** TIME = .314787E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1118E-04 OSCILLATION LIMIT = .8819
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.360 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2461E-01
HT FLOW CONVERGENCE VALUE= .1604E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 40 COMPLETED. CUM ITER = 394
*** TIME = .315576E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1144E-04 OSCILLATION LIMIT = .9027

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 21:27:31 JUN 18, 1995 CP= 21326.480
FOR SUPPORT CALL ROBERT BANNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/WTU SNF

HT FLOW CONVERGENCE VALUE= 61.45 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1038 CRITERION= .3746 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 395
 *** TIME = .323466E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1066E-04 OSCILLATION LIMIT = 8.411
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.15 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9828E-01 CRITERION= .3742 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 396
 *** TIME = .331355E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1802E-04 OSCILLATION LIMIT = 14.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.48 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9900E-01 CRITERION= .3739 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 397
 *** TIME = .339245E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1616E-04 OSCILLATION LIMIT = 12.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.18 CRITERION= .3789
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9829E-01 CRITERION= .3735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 398
 *** TIME = .347134E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1723E-04 OSCILLATION LIMIT = 13.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.51 CRITERION= .3785
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9875E-01 CRITERION= .3733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 399
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.21 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9819E-01 CRITERION= .3728 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 400
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1709E-04 OSCILLATION LIMIT = 13.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.54 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9855E-01 CRITERION= .3726 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 401
 *** TIME = .370802E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.24 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9797E-01 CRITERION= .3721 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 402
 *** TIME = .378692E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .1698E-04 OSCILLATION LIMIT = 13.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.58 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9812E-01 CRITERION= .3719 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 403
 *** TIME = .386581E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.27 CRITERION= .3769
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .3714 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 404
 *** TIME = .394470E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1689E-04 OSCILLATION LIMIT = 13.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.61 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .3712 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 405
 *** TIME = .402360E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.30 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9700E-01 CRITERION= .3707 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 406
 *** TIME = .410249E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1681E-04 OSCILLATION LIMIT = 13.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.64 CRITERION= .3758
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9748E-01 CRITERION= .3705 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 407
 *** TIME = .418139E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1643E-04 OSCILLATION LIMIT = 12.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.33 CRITERION= .3755
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9812E-01 CRITERION= .3700 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 408
 *** TIME = .426028E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1675E-04 OSCILLATION LIMIT = 13.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.67 CRITERION= .3751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1018 CRITERION= .3698 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 409
 *** TIME = .433917E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1643E-04 OSCILLATION LIMIT = 12.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.36 CRITERION= .3749
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .3693 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 410
 *** TIME = .441807E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1669E-04 OSCILLATION LIMIT = 13.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.70 CRITERION= .3744
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1014 CRITERION= .3691 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 411
 *** TIME = .449696E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.40 CRITERION= .3742
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1009 CRITERION= .3686 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 412
 *** TIME = .457586E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1664E-04 OSCILLATION LIMIT = 13.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.73 CRITERION= .3738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1009 CRITERION= .3684 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 413
 *** TIME = .465475E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1641E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.43 CRITERION= .3735
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .3680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 414
 *** TIME = .473364E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1660E-04 OSCILLATION LIMIT = 13.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.76 CRITERION= .3731
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3677 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 415
 *** TIME = .481254E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.46 CRITERION= .3728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1025 CRITERION= .3673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 416
 *** TIME = .489143E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1656E-04 OSCILLATION LIMIT = 13.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.79 CRITERION= .3724
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1024 CRITERION= .3670 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 417
 *** TIME = .497033E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1637E-04 OSCILLATION LIMIT = 12.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.49 CRITERION= .3722
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587

HT FLOW CONVERGENCE VALUE= .1019 CRITERION= .3666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 418
 *** TIME = .504922E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1652E-04 OSCILLATION LIMIT = 13.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.82 CRITERION= .3717
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1017 CRITERION= .3663 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 419
 *** TIME = .512811E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.52 CRITERION= .3715
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1013 CRITERION= .3659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 420
 *** TIME = .520701E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1648E-04 OSCILLATION LIMIT = 13.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.85 CRITERION= .3711
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1013 CRITERION= .3657 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 421
 *** TIME = .528590E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1633E-04 OSCILLATION LIMIT = 12.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.55 CRITERION= .3708
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .3652 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 422
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1645E-04 OSCILLATION LIMIT = 12.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.89 CRITERION= .3704
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .3650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 423
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1631E-04 OSCILLATION LIMIT = 12.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.58 CRITERION= .3701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1003 CRITERION= .3645 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 424
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1642E-04 OSCILLATION LIMIT = 12.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.92 CRITERION= .3697
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .1002 CRITERION= .3643 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 425
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.61 CRITERION= .3695
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9989E-01 CRITERION= .3638 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 426
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1639E-04 OSCILLATION LIMIT = 12.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.95 CRITERION= .3690
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9977E-01 CRITERION= .3636 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 427
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1626E-04 OSCILLATION LIMIT = 12.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.64 CRITERION= .3688
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9947E-01 CRITERION= .3631 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 428
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1635E-04 OSCILLATION LIMIT = 12.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.98 CRITERION= .3684
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9949E-01 CRITERION= .3629 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 429
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1623E-04 OSCILLATION LIMIT = 12.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.68 CRITERION= .3681
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9929E-01 CRITERION= .3624 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 430
 *** TIME = .599595E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1632E-04 OSCILLATION LIMIT = 12.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 62.01 CRITERION= .3677
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9931E-01 CRITERION= .3622 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 431
 *** TIME = .607484E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1621E-04 OSCILLATION LIMIT = 12.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.71 CRITERION= .3674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9909E-01 CRITERION= .3618 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 432
 *** TIME = .615374E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1629E-04 OSCILLATION LIMIT = 12.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 62.04 CRITERION= .3670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9915E-01 CRITERION= .3615 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 39 COMPLETED. CUM ITER = 433
 *** TIME = .623263E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1618E-04 OSCILLATION LIMIT = 12.76

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 61.74 CRITERION= .3668
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1587
 HT FLOW CONVERGENCE VALUE= .9899E-01 CRITERION= .3611 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 40 COMPLETED. CUM ITER = 434
 *** TIME = .631152E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .1626E-04 OSCILLATION LIMIT = 12.83

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:04:39 JUN 18, 1995 CP= 23526.380
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 33.19 CRITERION= .3626
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4811E-01 CRITERION= .3609 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 1 COMPLETED. CUM ITER = 435
 *** TIME = .639042E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4570E-04 OSCILLATION LIMIT = 36.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.87 CRITERION= .3623
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4837E-01 CRITERION= .3604 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 2 COMPLETED. CUM ITER = 436
 *** TIME = .646931E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4312E-04 OSCILLATION LIMIT = 34.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.20 CRITERION= .3619
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4930E-01 CRITERION= .3603 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 3 COMPLETED. CUM ITER = 437
 *** TIME = .654821E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3570E-04 OSCILLATION LIMIT = 28.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.88 CRITERION= .3618
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4836E-01 CRITERION= .3599 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 4 COMPLETED. CUM ITER = 438
 *** TIME = .662710E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4293E-04 OSCILLATION LIMIT = 33.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.21 CRITERION= .3614
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4913E-01 CRITERION= .3597 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 439
 *** TIME = .670599E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3650E-04 OSCILLATION LIMIT = 28.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.89 CRITERION= .3612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4837E-01 CRITERION= .3593 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 440

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*** TIME = .678489E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4215E-04    OSCILLATION LIMIT = 33.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.22    CRITERION= .3608
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4900E-01    CRITERION= .3591    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 441
*** TIME = .686378E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3713E-04    OSCILLATION LIMIT = 29.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.90    CRITERION= .3606
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4836E-01    CRITERION= .3587    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 442
*** TIME = .694268E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4154E-04    OSCILLATION LIMIT = 32.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.23    CRITERION= .3602
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4888E-01    CRITERION= .3585    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 443
*** TIME = .702157E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3760E-04    OSCILLATION LIMIT = 29.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.91    CRITERION= .3600
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4833E-01    CRITERION= .3581    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 444
*** TIME = .710046E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4108E-04    OSCILLATION LIMIT = 32.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.23    CRITERION= .3596
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4876E-01    CRITERION= .3579    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 445
*** TIME = .717936E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3794E-04    OSCILLATION LIMIT = 29.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.92    CRITERION= .3595
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4829E-01    CRITERION= .3575    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 446
*** TIME = .725825E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4073E-04    OSCILLATION LIMIT = 32.13
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 33.24    CRITERION= .3591
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4865E-01    CRITERION= .3574    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 447
*** TIME = .733715E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3820E-04    OSCILLATION LIMIT = 30.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.93    CRITERION= .3589
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
    HT FLOW CONVERGENCE VALUE= .4824E-01    CRITERION= .3570    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 448
*** TIME = .741604E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4045E-04 OSCILLATION LIMIT = 31.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.25 CRITERION= .3585
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4856E-01 CRITERION= .3568 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 449
*** TIME = .749493E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3838E-04 OSCILLATION LIMIT = 30.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.93 CRITERION= .3583
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4819E-01 CRITERION= .3564 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 450
*** TIME = .757383E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4024E-04 OSCILLATION LIMIT = 31.74
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.26 CRITERION= .3579
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3562 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 451
*** TIME = .765272E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3852E-04 OSCILLATION LIMIT = 30.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.94 CRITERION= .3577
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4813E-01 CRITERION= .3558 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 452
*** TIME = .773162E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .4006E-04 OSCILLATION LIMIT = 31.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.27 CRITERION= .3573
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4838E-01 CRITERION= .3556 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 453
*** TIME = .781051E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3861E-04 OSCILLATION LIMIT = 30.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.95 CRITERION= .3571
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4807E-01 CRITERION= .3552 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 454
*** TIME = .788940E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3993E-04 OSCILLATION LIMIT = 31.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.28 CRITERION= .3568
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
HT FLOW CONVERGENCE VALUE= .4829E-01 CRITERION= .3550 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 455
*** TIME = .796830E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3868E-04 OSCILLATION LIMIT = 30.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.96 CRITERION= .3566

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4800E-01 CRITERION= .3546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 456
 *** TIME = .804719E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3982E-04 OSCILLATION LIMIT = 31.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.29 CRITERION= .3562
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4821E-01 CRITERION= .3545 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 457
 *** TIME = .812609E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3872E-04 OSCILLATION LIMIT = 30.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.97 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4792E-01 CRITERION= .3541 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 458
 *** TIME = .820498E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3973E-04 OSCILLATION LIMIT = 31.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.30 CRITERION= .3556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4812E-01 CRITERION= .3539 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 459
 *** TIME = .828387E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3875E-04 OSCILLATION LIMIT = 30.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.98 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4786E-01 CRITERION= .3535 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 460
 *** TIME = .836277E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3965E-04 OSCILLATION LIMIT = 31.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.30 CRITERION= .3550
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4804E-01 CRITERION= .3533 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 461
 *** TIME = .844166E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.99 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4779E-01 CRITERION= .3529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 462
 *** TIME = .852056E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3958E-04 OSCILLATION LIMIT = 31.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.31 CRITERION= .3544
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4797E-01 CRITERION= .3527 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 463
 *** TIME = .859945E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3877E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.00 CRITERION= .3543
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4773E-01 CRITERION= .3523 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 464
 *** TIME = .867834E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3952E-04 OSCILLATION LIMIT = 31.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.32 CRITERION= .3539
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4790E-01 CRITERION= .3521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 465
 *** TIME = .875724E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.01 CRITERION= .3537
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4767E-01 CRITERION= .3517 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 466
 *** TIME = .883613E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3947E-04 OSCILLATION LIMIT = 31.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.33 CRITERION= .3533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4782E-01 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 467
 *** TIME = .891503E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3876E-04 OSCILLATION LIMIT = 30.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.01 CRITERION= .3531
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4759E-01 CRITERION= .3512 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 468
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3943E-04 OSCILLATION LIMIT = 31.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.34 CRITERION= .3527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4774E-01 CRITERION= .3510 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 469
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3875E-04 OSCILLATION LIMIT = 30.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.02 CRITERION= .3525
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4752E-01 CRITERION= .3506 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 470
 *** TIME = .915171E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3938E-04 OSCILLATION LIMIT = 31.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.35 CRITERION= .3521
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4766E-01 CRITERION= .3504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 471
 *** TIME = .923060E+08 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .3873E-04 OSCILLATION LIMIT = 30.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.03 CRITERION= .3520
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4744E-01 CRITERION= .3500 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 38 COMPLETED. CUM ITER = 472
 *** TIME = .930950E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3934E-04 OSCILLATION LIMIT = 31.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.36 CRITERION= .3516
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4758E-01 CRITERION= .3498 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 39 COMPLETED. CUM ITER = 473
 *** TIME = .938839E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3872E-04 OSCILLATION LIMIT = 30.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 33.04 CRITERION= .3514
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8497E-01
 HT FLOW CONVERGENCE VALUE= .4737E-01 CRITERION= .3494 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 40 COMPLETED. CUM ITER = 474
 *** TIME = .946728E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3931E-04 OSCILLATION LIMIT = 31.01

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:41:46 JUN 18, 1995 CP= 25726.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 20.63 CRITERION= .3500
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .3493 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 1 COMPLETED. CUM ITER = 475
 *** TIME = .954618E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6600E-04 OSCILLATION LIMIT = 52.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.31 CRITERION= .3499
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2805E-01 CRITERION= .3489 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 2 COMPLETED. CUM ITER = 476
 *** TIME = .962507E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6599E-04 OSCILLATION LIMIT = 52.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.64 CRITERION= .3495
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2823E-01 CRITERION= .3488 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 3 COMPLETED. CUM ITER = 477
 *** TIME = .970397E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6197E-04 OSCILLATION LIMIT = 48.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3494
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2802E-01 CRITERION= .3484 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 478
 *** TIME = .978286E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6590E-04 OSCILLATION LIMIT = 51.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.64 CRITERION= .3490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .3483 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 479
 *** TIME = .986175E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6229E-04 OSCILLATION LIMIT = 49.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3489
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2798E-01 CRITERION= .3479 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 480
 *** TIME = .994065E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6562E-04 OSCILLATION LIMIT = 51.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.64 CRITERION= .3485
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2814E-01 CRITERION= .3478 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 481
 *** TIME = .100195E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6254E-04 OSCILLATION LIMIT = 49.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.32 CRITERION= .3483
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2794E-01 CRITERION= .3474 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 482
 *** TIME = .100984E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6540E-04 OSCILLATION LIMIT = 51.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3480
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2809E-01 CRITERION= .3473 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 483
 *** TIME = .101773E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6272E-04 OSCILLATION LIMIT = 49.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3478
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2790E-01 CRITERION= .3469 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 484
 *** TIME = .102562E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6523E-04 OSCILLATION LIMIT = 51.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3475
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2805E-01 CRITERION= .3468 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 485
 *** TIME = .103351E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6286E-04 OSCILLATION LIMIT = 49.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3473
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01

HT FLOW CONVERGENCE VALUE= .2786E-01 CRITERION= .3464 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 486
 *** TIME = .104140E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6509E-04 OSCILLATION LIMIT = 51.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.65 CRITERION= .3470
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2801E-01 CRITERION= .3462 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 487
 *** TIME = .104929E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6296E-04 OSCILLATION LIMIT = 49.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.33 CRITERION= .3468
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2782E-01 CRITERION= .3459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 488
 *** TIME = .105718E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6498E-04 OSCILLATION LIMIT = 51.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3465
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2797E-01 CRITERION= .3457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 489
 *** TIME = .106507E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6304E-04 OSCILLATION LIMIT = 49.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2778E-01 CRITERION= .3454 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 490
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6489E-04 OSCILLATION LIMIT = 51.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2792E-01 CRITERION= .3452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 491
 *** TIME = .108085E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6309E-04 OSCILLATION LIMIT = 49.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2774E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 492
 *** TIME = .108874E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6482E-04 OSCILLATION LIMIT = 51.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.66 CRITERION= .3455
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2788E-01 CRITERION= .3447 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 493
 *** TIME = .109663E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6313E-04 OSCILLATION LIMIT = 49.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.34 CRITERION= .3453
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2770E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 494
 *** TIME = .110452E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6476E-04 OSCILLATION LIMIT = 51.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2784E-01 CRITERION= .3442 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 495
 *** TIME = .111241E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6316E-04 OSCILLATION LIMIT = 49.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3448
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2766E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 496
 *** TIME = .112030E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6471E-04 OSCILLATION LIMIT = 51.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2780E-01 CRITERION= .3437 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 497
 *** TIME = .112818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6318E-04 OSCILLATION LIMIT = 49.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3443
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2762E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 498
 *** TIME = .113607E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6467E-04 OSCILLATION LIMIT = 51.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.67 CRITERION= .3440
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2776E-01 CRITERION= .3432 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 25 COMPLETED. CUM ITER = 499
 *** TIME = .114396E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6320E-04 OSCILLATION LIMIT = 49.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.35 CRITERION= .3438
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2758E-01 CRITERION= .3429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 26 COMPLETED. CUM ITER = 500
 *** TIME = .115185E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6463E-04 OSCILLATION LIMIT = 50.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3435
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2771E-01 CRITERION= .3427 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 27 COMPLETED. CUM ITER = 501
 *** TIME = .115974E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2754E-01 CRITERION= .3423 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 28 COMPLETED. CUM ITER = 502
 *** TIME = .116763E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6460E-04 OSCILLATION LIMIT = 50.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3430
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2768E-01 CRITERION= .3422 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 29 COMPLETED. CUM ITER = 503
 *** TIME = .117552E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3428
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2750E-01 CRITERION= .3418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 30 COMPLETED. CUM ITER = 504
 *** TIME = .118341E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6457E-04 OSCILLATION LIMIT = 50.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.68 CRITERION= .3425
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2763E-01 CRITERION= .3417 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 31 COMPLETED. CUM ITER = 505
 *** TIME = .119130E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.36 CRITERION= .3423
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2747E-01 CRITERION= .3413 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 506
 *** TIME = .119919E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6454E-04 OSCILLATION LIMIT = 50.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.69 CRITERION= .3420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2759E-01 CRITERION= .3412 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 507
 *** TIME = .120708E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6321E-04 OSCILLATION LIMIT = 49.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.37 CRITERION= .3418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2743E-01 CRITERION= .3408 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 508
 *** TIME = .121497E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6451E-04 OSCILLATION LIMIT = 50.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.69 CRITERION= .3415
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
 HT FLOW CONVERGENCE VALUE= .2755E-01 CRITERION= .3407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 509

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*** TIME = .122286E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6321E-04    OSCILLATION LIMIT = 49.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 20.37    CRITERION= .3413
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
    HT FLOW CONVERGENCE VALUE= .2738E-01    CRITERION= .3403    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 510
*** TIME = .123075E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6449E-04    OSCILLATION LIMIT = 50.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 20.69    CRITERION= .3409
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
    HT FLOW CONVERGENCE VALUE= .2751E-01    CRITERION= .3402    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 511
*** TIME = .123864E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6321E-04    OSCILLATION LIMIT = 49.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 20.37    CRITERION= .3408
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
    HT FLOW CONVERGENCE VALUE= .2734E-01    CRITERION= .3398    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 512
*** TIME = .124653E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6446E-04    OSCILLATION LIMIT = 50.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 20.70    CRITERION= .3404
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
    HT FLOW CONVERGENCE VALUE= .2746E-01    CRITERION= .3397    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 513
*** TIME = .125441E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6321E-04    OSCILLATION LIMIT = 49.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 20.38    CRITERION= .3403
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5261E-01
    HT FLOW CONVERGENCE VALUE= .2730E-01    CRITERION= .3393    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 514
*** TIME = .126230E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6444E-04    OSCILLATION LIMIT = 50.84

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:19:46 JUN 18, 1995 CP= 27947.470
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 13.92    CRITERION= .3396
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4451E-01
    HT FLOW CONVERGENCE VALUE= .1894E-01    CRITERION= .3392    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 515
*** TIME = .127019E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7372E-04    OSCILLATION LIMIT = 58.16
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.59    CRITERION= .3395
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4317E-01
    HT FLOW CONVERGENCE VALUE= .1874E-01    CRITERION= .3389    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 516
*** TIME = .127808E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7496E-04 OSCILLATION LIMIT = 59.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3392
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4238E-01
HT FLOW CONVERGENCE VALUE= .1877E-01 CRITERION= .3388 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 517
*** TIME = .128597E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7306E-04 OSCILLATION LIMIT = 57.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4330E-01
HT FLOW CONVERGENCE VALUE= .1872E-01 CRITERION= .3385 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 518
*** TIME = .129386E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7494E-04 OSCILLATION LIMIT = 59.12
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4254E-01
HT FLOW CONVERGENCE VALUE= .1875E-01 CRITERION= .3384 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 519
*** TIME = .130175E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7309E-04 OSCILLATION LIMIT = 57.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3386
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4315E-01
HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .3380 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 520
*** TIME = .130964E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7491E-04 OSCILLATION LIMIT = 59.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3383
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4267E-01
HT FLOW CONVERGENCE VALUE= .1874E-01 CRITERION= .3379 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 521
*** TIME = .131753E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7312E-04 OSCILLATION LIMIT = 57.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3382
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1865E-01 CRITERION= .3376 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 522
*** TIME = .132542E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7489E-04 OSCILLATION LIMIT = 59.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3379
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4277E-01
HT FLOW CONVERGENCE VALUE= .1872E-01 CRITERION= .3375 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 523
*** TIME = .133331E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7314E-04 OSCILLATION LIMIT = 57.70
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3378

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4295E-01
 HT FLOW CONVERGENCE VALUE= .1862E-01 CRITERION= .3372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 524
 *** TIME = .134120E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7486E-04 OSCILLATION LIMIT = 59.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3374
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4285E-01
 HT FLOW CONVERGENCE VALUE= .1870E-01 CRITERION= .3371 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 525
 *** TIME = .134909E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7316E-04 OSCILLATION LIMIT = 57.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3373
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4289E-01
 HT FLOW CONVERGENCE VALUE= .1859E-01 CRITERION= .3367 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 526
 *** TIME = .135698E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7484E-04 OSCILLATION LIMIT = 59.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.92 CRITERION= .3370
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4290E-01
 HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .3366 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 527
 *** TIME = .136487E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7317E-04 OSCILLATION LIMIT = 57.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.60 CRITERION= .3369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4285E-01
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .3363 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 528
 *** TIME = .137276E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7483E-04 OSCILLATION LIMIT = 59.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3366
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4294E-01
 HT FLOW CONVERGENCE VALUE= .1865E-01 CRITERION= .3362 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 529
 *** TIME = .138065E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7318E-04 OSCILLATION LIMIT = 57.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
 HT FLOW CONVERGENCE VALUE= .1854E-01 CRITERION= .3359 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 530
 *** TIME = .138853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7481E-04 OSCILLATION LIMIT = 59.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4297E-01
 HT FLOW CONVERGENCE VALUE= .1863E-01 CRITERION= .3358 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 531
 *** TIME = .139642E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7319E-04 OSCILLATION LIMIT = 57.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3360
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .3354 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 532
 *** TIME = .140431E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7479E-04 OSCILLATION LIMIT = 59.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3357
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299E-01
 HT FLOW CONVERGENCE VALUE= .1861E-01 CRITERION= .3353 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 533
 *** TIME = .141220E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7320E-04 OSCILLATION LIMIT = 57.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3356
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .3350 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 534
 *** TIME = .142009E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7478E-04 OSCILLATION LIMIT = 59.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4301E-01
 HT FLOW CONVERGENCE VALUE= .1858E-01 CRITERION= .3349 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 535
 *** TIME = .142798E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7320E-04 OSCILLATION LIMIT = 57.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3352
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3346 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 536
 *** TIME = .143587E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7476E-04 OSCILLATION LIMIT = 58.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3348
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4302E-01
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .3345 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 537
 *** TIME = .144376E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7321E-04 OSCILLATION LIMIT = 57.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3347
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
 HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3341 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 538
 *** TIME = .145165E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7475E-04 OSCILLATION LIMIT = 58.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
 HT FLOW CONVERGENCE VALUE= .1853E-01 CRITERION= .3340 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 539
 *** TIME = .145954E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .7321E-04 OSCILLATION LIMIT = 57.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3343
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4280E-01
HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3337 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 540
*** TIME = .146743E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7474E-04 OSCILLATION LIMIT = 58.96
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.93 CRITERION= .3340
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1851E-01 CRITERION= .3336 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 541
*** TIME = .147532E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.61 CRITERION= .3339
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .3333 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 542
*** TIME = .148321E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7473E-04 OSCILLATION LIMIT = 58.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3336
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4304E-01
HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .3332 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 543
*** TIME = .149110E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3335
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4281E-01
HT FLOW CONVERGENCE VALUE= .1836E-01 CRITERION= .3328 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 544
*** TIME = .149899E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7471E-04 OSCILLATION LIMIT = 58.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3331
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .3327 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 545
*** TIME = .150688E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3330
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4282E-01
HT FLOW CONVERGENCE VALUE= .1834E-01 CRITERION= .3324 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 546
*** TIME = .151477E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7470E-04 OSCILLATION LIMIT = 58.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3327
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1844E-01 CRITERION= .3323 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 547
*** TIME = .152265E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3326
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4282E-01
HT FLOW CONVERGENCE VALUE= .1831E-01 CRITERION= .3320 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 548
*** TIME = .153054E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7469E-04 OSCILLATION LIMIT = 58.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3323
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .3319 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 549
*** TIME = .153843E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3322
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
HT FLOW CONVERGENCE VALUE= .1829E-01 CRITERION= .3316 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 550
*** TIME = .154632E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7468E-04 OSCILLATION LIMIT = 58.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3318
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .3315 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 551
*** TIME = .155421E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3317
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4283E-01
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .3311 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 552
*** TIME = .156210E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7467E-04 OSCILLATION LIMIT = 58.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.94 CRITERION= .3314
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4303E-01
HT FLOW CONVERGENCE VALUE= .1836E-01 CRITERION= .3310 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 553
*** TIME = .156999E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7323E-04 OSCILLATION LIMIT = 57.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.62 CRITERION= .3313
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4284E-01
HT FLOW CONVERGENCE VALUE= .1824E-01 CRITERION= .3307 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 554
*** TIME = .157788E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7466E-04 OSCILLATION LIMIT = 58.90

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***** ANSYS SOLVE... COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:58:19 JUN 18, 1995 CP= 30188.920
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.439 CRITERION= .3308
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5522E-01
 HT FLOW CONVERGENCE VALUE= .1572E-01 CRITERION= .3306 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 555
 *** TIME = .158577E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6768E-04 OSCILLATION LIMIT = 53.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.119 CRITERION= .3307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5464E-01
 HT FLOW CONVERGENCE VALUE= .1562E-01 CRITERION= .3302 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 556
 *** TIME = .159366E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6852E-04 OSCILLATION LIMIT = 54.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.440 CRITERION= .3304
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5287E-01
 HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3301 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 557
 *** TIME = .160155E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6854E-04 OSCILLATION LIMIT = 54.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.120 CRITERION= .3303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5464E-01
 HT FLOW CONVERGENCE VALUE= .1557E-01 CRITERION= .3298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 558
 *** TIME = .160944E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6857E-04 OSCILLATION LIMIT = 54.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.440 CRITERION= .3299
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5314E-01
 HT FLOW CONVERGENCE VALUE= .1534E-01 CRITERION= .3297 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 559
 *** TIME = .161733E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6844E-04 OSCILLATION LIMIT = 53.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.121 CRITERION= .3298
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5442E-01
 HT FLOW CONVERGENCE VALUE= .1552E-01 CRITERION= .3294 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 560
 *** TIME = .162522E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6866E-04 OSCILLATION LIMIT = 54.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.441 CRITERION= .3295
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5335E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3293 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 561
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6835E-04 OSCILLATION LIMIT = 53.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.122 CRITERION= .3294
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5426E-01
 HT FLOW CONVERGENCE VALUE= .1547E-01 CRITERION= .3289 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 562
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6874E-04 OSCILLATION LIMIT = 54.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.442 CRITERION= .3290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5351E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 563
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6829E-04 OSCILLATION LIMIT = 53.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.122 CRITERION= .3289
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5413E-01
 HT FLOW CONVERGENCE VALUE= .1542E-01 CRITERION= .3285 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 564
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6879E-04 OSCILLATION LIMIT = 54.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.442 CRITERION= .3286
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5363E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3284 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 565
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6824E-04 OSCILLATION LIMIT = 53.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.123 CRITERION= .3285
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5404E-01
 HT FLOW CONVERGENCE VALUE= .1539E-01 CRITERION= .3280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 566
 *** TIME = .167255E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6882E-04 OSCILLATION LIMIT = 54.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.443 CRITERION= .3282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5372E-01
 HT FLOW CONVERGENCE VALUE= .1534E-01 CRITERION= .3279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 567
 *** TIME = .168044E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6821E-04 OSCILLATION LIMIT = 53.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.124 CRITERION= .3281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5398E-01
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .3276 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 568
 *** TIME = .168833E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6885E-04 OSCILLATION LIMIT = 54.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.444 CRITERION= .3277
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5378E-01
 HT FLOW CONVERGENCE VALUE= .1533E-01 CRITERION= .3275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 569
 *** TIME = .169622E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6818E-04 OSCILLATION LIMIT = 53.79

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.124      CRITERION= .3276
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5393E-01
  HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3272    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 570
*** TIME = .170411E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.444      CRITERION= .3273
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5384E-01
  HT FLOW CONVERGENCE VALUE= .1532E-01 CRITERION= .3271    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 571
*** TIME = .171200E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6816E-04 OSCILLATION LIMIT = 53.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.125      CRITERION= .3272
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5390E-01
  HT FLOW CONVERGENCE VALUE= .1530E-01 CRITERION= .3267    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 572
*** TIME = .171989E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.445      CRITERION= .3268
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
  HT FLOW CONVERGENCE VALUE= .1530E-01 CRITERION= .3266    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 573
*** TIME = .172778E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6814E-04 OSCILLATION LIMIT = 53.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.126      CRITERION= .3267
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
  HT FLOW CONVERGENCE VALUE= .1527E-01 CRITERION= .3263    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 574
*** TIME = .173567E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.445      CRITERION= .3264
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5391E-01
  HT FLOW CONVERGENCE VALUE= .1529E-01 CRITERION= .3262    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 575
*** TIME = .174356E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6813E-04 OSCILLATION LIMIT = 53.75
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.127      CRITERION= .3263
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
  HT FLOW CONVERGENCE VALUE= .1525E-01 CRITERION= .3258    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 576
*** TIME = .175145E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04 OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 9.446      CRITERION= .3260
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5393E-01
  HT FLOW CONVERGENCE VALUE= .1527E-01 CRITERION= .3257    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 577

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*** TIME = .175934E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6812E-04    OSCILLATION LIMIT = 53.74
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.127    CRITERION= .3258
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
    HT FLOW CONVERGENCE VALUE= .1522E-01    CRITERION= .3254    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 578
*** TIME = .176723E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04    OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.447    CRITERION= .3255
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5395E-01
    HT FLOW CONVERGENCE VALUE= .1526E-01    CRITERION= .3253    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 579
*** TIME = .177512E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6812E-04    OSCILLATION LIMIT = 53.74
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.128    CRITERION= .3254
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5386E-01
    HT FLOW CONVERGENCE VALUE= .1520E-01    CRITERION= .3249    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 580
*** TIME = .178300E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04    OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.447    CRITERION= .3251
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5396E-01
    HT FLOW CONVERGENCE VALUE= .1524E-01    CRITERION= .3248    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 581
*** TIME = .179089E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6811E-04    OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.129    CRITERION= .3250
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
    HT FLOW CONVERGENCE VALUE= .1518E-01    CRITERION= .3245    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 582
*** TIME = .179878E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04    OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.448    CRITERION= .3246
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5398E-01
    HT FLOW CONVERGENCE VALUE= .1522E-01    CRITERION= .3244    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 583
*** TIME = .180667E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6811E-04    OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.130    CRITERION= .3245
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5387E-01
    HT FLOW CONVERGENCE VALUE= .1516E-01    CRITERION= .3241    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 584
*** TIME = .181456E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6889E-04    OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 9.449    CRITERION= .3242
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5399E-01
    HT FLOW CONVERGENCE VALUE= .1520E-01    CRITERION= .3240    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 585
*** TIME = .182245E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.130 CRITERION= .3241
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
HT FLOW CONVERGENCE VALUE= .1514E-01 CRITERION= .3236 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 586
*** TIME = .183034E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.449 CRITERION= .3238
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5400E-01
HT FLOW CONVERGENCE VALUE= .1518E-01 CRITERION= .3235 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 587
*** TIME = .183823E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.131 CRITERION= .3236
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5388E-01
HT FLOW CONVERGENCE VALUE= .1512E-01 CRITERION= .3232 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 588
*** TIME = .184612E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6888E-04 OSCILLATION LIMIT = 54.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.450 CRITERION= .3233
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5400E-01
HT FLOW CONVERGENCE VALUE= .1516E-01 CRITERION= .3231 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 589
*** TIME = .185401E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6810E-04 OSCILLATION LIMIT = 53.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.132 CRITERION= .3232
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5389E-01
HT FLOW CONVERGENCE VALUE= .1510E-01 CRITERION= .3227 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 590
*** TIME = .186190E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.451 CRITERION= .3229
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5401E-01
HT FLOW CONVERGENCE VALUE= .1514E-01 CRITERION= .3226 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 591
*** TIME = .186979E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6809E-04 OSCILLATION LIMIT = 53.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.132 CRITERION= .3228
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5390E-01
HT FLOW CONVERGENCE VALUE= .1508E-01 CRITERION= .3223 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 592
*** TIME = .187768E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6887E-04 OSCILLATION LIMIT = 54.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.451 CRITERION= .3224

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5402E-01
 HT FLOW CONVERGENCE VALUE= .1513E-01 CRITERION= .3222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 593
 *** TIME = .188557E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6809E-04 OSCILLATION LIMIT = 53.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.133 CRITERION= .3223
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5391E-01
 HT FLOW CONVERGENCE VALUE= .1506E-01 CRITERION= .3219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 594
 *** TIME = .189346E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6886E-04 OSCILLATION LIMIT = 54.33

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 00:37:05 JUN 19, 1995 CP= 32428.970
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 6.540 CRITERION= .3219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5046E-01
 HT FLOW CONVERGENCE VALUE= .1313E-01 CRITERION= .3218 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 595
 *** TIME = .190135E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6098E-04 OSCILLATION LIMIT = 48.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3218
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4982E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 596
 *** TIME = .190924E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6199E-04 OSCILLATION LIMIT = 48.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.540 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1291E-01 CRITERION= .3214 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 597
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6135E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3215
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4992E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3211 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 598
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6196E-04 OSCILLATION LIMIT = 48.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3212
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1290E-01 CRITERION= .3210 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 599
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6135E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.222 CRITERION= .3211
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993E-01
 HT FLOW CONVERGENCE VALUE= .1286E-01 CRITERION= .3207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 600
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6195E-04 OSCILLATION LIMIT = 48.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1288E-01 CRITERION= .3206 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 601
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.223 CRITERION= .3207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4994E-01
 HT FLOW CONVERGENCE VALUE= .1284E-01 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 602
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6195E-04 OSCILLATION LIMIT = 48.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3204
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1286E-01 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 603
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.223 CRITERION= .3203
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4995E-01
 HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3200 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 604
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6194E-04 OSCILLATION LIMIT = 48.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.541 CRITERION= .3200
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1285E-01 CRITERION= .3199 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 605
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6134E-04 OSCILLATION LIMIT = 48.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4996E-01
 HT FLOW CONVERGENCE VALUE= .1281E-01 CRITERION= .3196 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 606
 *** TIME = .198813E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6194E-04 OSCILLATION LIMIT = 48.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3196
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5012E-01
 HT FLOW CONVERGENCE VALUE= .1283E-01 CRITERION= .3195 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 607
 *** TIME = .199602E+09 TIME INC = 788940.


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*** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3196
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4997E-01
HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3192 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 608
*** TIME = .200391E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6193E-04 OSCILLATION LIMIT = 48.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3193
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5012E-01
HT FLOW CONVERGENCE VALUE= .1282E-01 CRITERION= .3191 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 609
*** TIME = .201180E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.224 CRITERION= .3192
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4999E-01
HT FLOW CONVERGENCE VALUE= .1278E-01 CRITERION= .3188 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 610
*** TIME = .201969E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6192E-04 OSCILLATION LIMIT = 48.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.542 CRITERION= .3189
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
HT FLOW CONVERGENCE VALUE= .1281E-01 CRITERION= .3187 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 611
*** TIME = .202758E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3188
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5000E-01
HT FLOW CONVERGENCE VALUE= .1276E-01 CRITERION= .3184 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 612
*** TIME = .203547E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6192E-04 OSCILLATION LIMIT = 48.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3185
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
HT FLOW CONVERGENCE VALUE= .1279E-01 CRITERION= .3184 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 613
*** TIME = .204335E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6133E-04 OSCILLATION LIMIT = 48.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3184
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5001E-01
HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3181 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 614
*** TIME = .205124E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .6191E-04 OSCILLATION LIMIT = 48.84
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3181
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5013E-01
HT FLOW CONVERGENCE VALUE= .1278E-01 CRITERION= .3180 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 615
 *** TIME = .205913E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.225 CRITERION= .3180
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5002E-01
 HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3177 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 616
 *** TIME = .206702E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6191E-04 OSCILLATION LIMIT = 48.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5014E-01
 HT FLOW CONVERGENCE VALUE= .1276E-01 CRITERION= .3176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 617
 *** TIME = .207491E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5003E-01
 HT FLOW CONVERGENCE VALUE= .1272E-01 CRITERION= .3173 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 618
 *** TIME = .208280E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6190E-04 OSCILLATION LIMIT = 48.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.543 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5014E-01
 HT FLOW CONVERGENCE VALUE= .1275E-01 CRITERION= .3172 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 619
 *** TIME = .209069E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6132E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5004E-01
 HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 620
 *** TIME = .209858E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6189E-04 OSCILLATION LIMIT = 48.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5015E-01
 HT FLOW CONVERGENCE VALUE= .1273E-01 CRITERION= .3168 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 621
 *** TIME = .210647E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.226 CRITERION= .3169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5005E-01
 HT FLOW CONVERGENCE VALUE= .1268E-01 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 622
 *** TIME = .211436E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6189E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5015E-01

HT FLOW CONVERGENCE VALUE= .1271E-01 CRITERION= .3165 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 623
 *** TIME = .212225E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.227 CRITERION= .3165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5006E-01
 HT FLOW CONVERGENCE VALUE= .1267E-01 CRITERION= .3161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 624
 *** TIME = .213014E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6188E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5016E-01
 HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 625
 *** TIME = .213803E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6131E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.227 CRITERION= .3161
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5007E-01
 HT FLOW CONVERGENCE VALUE= .1265E-01 CRITERION= .3158 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 626
 *** TIME = .214592E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6187E-04 OSCILLATION LIMIT = 48.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.544 CRITERION= .3158
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1268E-01 CRITERION= .3157 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 627
 *** TIME = .215381E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5008E-01
 HT FLOW CONVERGENCE VALUE= .1263E-01 CRITERION= .3154 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 628
 *** TIME = .216170E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6187E-04 OSCILLATION LIMIT = 48.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1266E-01 CRITERION= .3153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 629
 *** TIME = .216959E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5009E-01
 HT FLOW CONVERGENCE VALUE= .1261E-01 CRITERION= .3150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 630
 *** TIME = .217747E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6186E-04 OSCILLATION LIMIT = 48.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5018E-01
 HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .3149 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 631
 *** TIME = .218536E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6130E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.228 CRITERION= .3150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5010E-01
 HT FLOW CONVERGENCE VALUE= .1259E-01 CRITERION= .3146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 632
 *** TIME = .219325E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6186E-04 OSCILLATION LIMIT = 48.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.545 CRITERION= .3147
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5019E-01
 HT FLOW CONVERGENCE VALUE= .1262E-01 CRITERION= .3146 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 633
 *** TIME = .220114E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6129E-04 OSCILLATION LIMIT = 48.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 6.229 CRITERION= .3146
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011E-01
 HT FLOW CONVERGENCE VALUE= .1257E-01 CRITERION= .3142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 634
 *** TIME = .220903E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .6185E-04 OSCILLATION LIMIT = 48.80.

***** ANSYS SOLVE COMMAND *****
 1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:14:47 JUN 19, 1995 CP= 34629.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3143
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1186E-01 CRITERION= .3142 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 635
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5926E-04 OSCILLATION LIMIT = 46.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.389 CRITERION= .3142
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4732E-01
 HT FLOW CONVERGENCE VALUE= .1173E-01 CRITERION= .3139 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 636
 *** TIME = .222481E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5997E-04 OSCILLATION LIMIT = 47.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4764E-01
 HT FLOW CONVERGENCE VALUE= .1180E-01 CRITERION= .3138 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 637
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.389 CRITERION= .3139
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4737E-01
HT FLOW CONVERGENCE VALUE= .1172E-01 CRITERION= .3135 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 638
*** TIME = .224059E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5995E-04 OSCILLATION LIMIT = 47.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3136
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
HT FLOW CONVERGENCE VALUE= .1178E-01 CRITERION= .3135 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 639
*** TIME = .224848E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3135
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4740E-01
HT FLOW CONVERGENCE VALUE= .1172E-01 CRITERION= .3132 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 640
*** TIME = .225637E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5993E-04 OSCILLATION LIMIT = 47.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.706 CRITERION= .3132
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
HT FLOW CONVERGENCE VALUE= .1176E-01 CRITERION= .3131 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 641
*** TIME = .226426E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3132
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4742E-01
HT FLOW CONVERGENCE VALUE= .1170E-01 CRITERION= .3128 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 642
*** TIME = .227215E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5992E-04 OSCILLATION LIMIT = 47.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707 CRITERION= .3129
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
HT FLOW CONVERGENCE VALUE= .1173E-01 CRITERION= .3128 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 643
*** TIME = .228004E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.390 CRITERION= .3128
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4744E-01
HT FLOW CONVERGENCE VALUE= .1167E-01 CRITERION= .3125 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 644
*** TIME = .228793E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5991E-04 OSCILLATION LIMIT = 47.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.707 CRITERION= .3125
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
HT FLOW CONVERGENCE VALUE= .1171E-01 CRITERION= .3124 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 645

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*** TIME = .229582E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.390    CRITERION= .3124
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4746E-01
    HT FLOW CONVERGENCE VALUE= .1166E-01    CRITERION= .3121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 12 COMPLETED. CUM ITER = 646
*** TIME = .230371E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5990E-04    OSCILLATION LIMIT = 47.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3122
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1170E-01    CRITERION= .3121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 13 COMPLETED. CUM ITER = 647
*** TIME = .231159E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3121
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4748E-01
    HT FLOW CONVERGENCE VALUE= .1164E-01    CRITERION= .3118    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 14 COMPLETED. CUM ITER = 648
*** TIME = .231948E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5989E-04    OSCILLATION LIMIT = 47.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3118
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1168E-01    CRITERION= .3117    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 15 COMPLETED. CUM ITER = 649
*** TIME = .232737E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3117
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4749E-01
    HT FLOW CONVERGENCE VALUE= .1163E-01    CRITERION= .3114    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 16 COMPLETED. CUM ITER = 650
*** TIME = .233526E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5988E-04    OSCILLATION LIMIT = 47.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.707    CRITERION= .3115
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1166E-01    CRITERION= .3113    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 17 COMPLETED. CUM ITER = 651
*** TIME = .234315E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04    OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.391    CRITERION= .3114
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4750E-01
    HT FLOW CONVERGENCE VALUE= .1161E-01    CRITERION= .3111    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 18 COMPLETED. CUM ITER = 652
*** TIME = .235104E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5987E-04    OSCILLATION LIMIT = 47.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 5.708    CRITERION= .3111
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
    HT FLOW CONVERGENCE VALUE= .1165E-01    CRITERION= .3110    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 653
*** TIME = .235893E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3110
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4751E-01
HT FLOW CONVERGENCE VALUE= .1160E-01 CRITERION= .3107 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 654
*** TIME = .236682E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5987E-04 OSCILLATION LIMIT = 47.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3107
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
HT FLOW CONVERGENCE VALUE= .1164E-01 CRITERION= .3106 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 655
*** TIME = .237471E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3107
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4752E-01
HT FLOW CONVERGENCE VALUE= .1159E-01 CRITERION= .3103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 656
*** TIME = .238260E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5986E-04 OSCILLATION LIMIT = 47.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3104
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
HT FLOW CONVERGENCE VALUE= .1163E-01 CRITERION= .3103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 657
*** TIME = .239049E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5935E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3103
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4753E-01
HT FLOW CONVERGENCE VALUE= .1158E-01 CRITERION= .3100 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 658
*** TIME = .239838E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5986E-04 OSCILLATION LIMIT = 47.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3100
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
HT FLOW CONVERGENCE VALUE= .1161E-01 CRITERION= .3099 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 659
*** TIME = .240627E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.392 CRITERION= .3100
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4754E-01
HT FLOW CONVERGENCE VALUE= .1156E-01 CRITERION= .3096 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 660
*** TIME = .241416E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5985E-04 OSCILLATION LIMIT = 47.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.708 CRITERION= .3097

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
 HT FLOW CONVERGENCE VALUE= .1159E-01 CRITERION= .3096 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 661
 *** TIME = .242205E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3096
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4755E-01
 HT FLOW CONVERGENCE VALUE= .1155E-01 CRITERION= .3093 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 662
 *** TIME = .242994E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5984E-04 OSCILLATION LIMIT = 47.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3093
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4761E-01
 HT FLOW CONVERGENCE VALUE= .1158E-01 CRITERION= .3092 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 663
 *** TIME = .243782E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5934E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3093
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4756E-01
 HT FLOW CONVERGENCE VALUE= .1154E-01 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 664
 *** TIME = .244571E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5984E-04 OSCILLATION LIMIT = 47.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3090
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
 HT FLOW CONVERGENCE VALUE= .1157E-01 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 665
 *** TIME = .245360E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.393 CRITERION= .3089
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4757E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3086 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 666
 *** TIME = .246149E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5983E-04 OSCILLATION LIMIT = 47.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3086
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4762E-01
 HT FLOW CONVERGENCE VALUE= .1156E-01 CRITERION= .3085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 667
 *** TIME = .246938E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3086
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 668
 *** TIME = .247727E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5983E-04 OSCILLATION LIMIT = 47.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3083
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4763E-01
 HT FLOW CONVERGENCE VALUE= .1155E-01 CRITERION= .3082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 669
 *** TIME = .248516E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5933E-04 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4758E-01
 HT FLOW CONVERGENCE VALUE= .1150E-01 CRITERION= .3079 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 670
 *** TIME = .249305E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5982E-04 OSCILLATION LIMIT = 47.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4763E-01
 HT FLOW CONVERGENCE VALUE= .1154E-01 CRITERION= .3078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 671
 *** TIME = .250094E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5932E-04 OSCILLATION LIMIT = 46.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4759E-01
 HT FLOW CONVERGENCE VALUE= .1149E-01 CRITERION= .3075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 672
 *** TIME = .250883E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5981E-04 OSCILLATION LIMIT = 47.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.709 CRITERION= .3076
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4764E-01
 HT FLOW CONVERGENCE VALUE= .1152E-01 CRITERION= .3074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 673
 *** TIME = .251672E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5932E-04 OSCILLATION LIMIT = 46.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 5.394 CRITERION= .3075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4760E-01
 HT FLOW CONVERGENCE VALUE= .1147E-01 CRITERION= .3072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 674
 *** TIME = .252461E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5981E-04 OSCILLATION LIMIT = 47.19

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:52:28 JUN 19, 1995 CP= 36829.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3072
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6105E-01
 HT FLOW CONVERGENCE VALUE= .1724E-01 CRITERION= .3071 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 675
 *** TIME = .253250E+09 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .2590E-04 OSCILLATION LIMIT = 20.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3071
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6036E-01
HT FLOW CONVERGENCE VALUE= .1708E-01 CRITERION= .3068 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 676
*** TIME = .254039E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2593E-04 OSCILLATION LIMIT = 20.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3068
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5802E-01
HT FLOW CONVERGENCE VALUE= .1640E-01 CRITERION= .3068 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 677
*** TIME = .254828E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2575E-04 OSCILLATION LIMIT = 20.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3068
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6036E-01
HT FLOW CONVERGENCE VALUE= .1702E-01 CRITERION= .3065 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 678
*** TIME = .255617E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2594E-04 OSCILLATION LIMIT = 20.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3065
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5836E-01
HT FLOW CONVERGENCE VALUE= .1646E-01 CRITERION= .3064 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 679
*** TIME = .256406E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2577E-04 OSCILLATION LIMIT = 20.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3064
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6007E-01
HT FLOW CONVERGENCE VALUE= .1694E-01 CRITERION= .3062 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 680
*** TIME = .257194E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2591E-04 OSCILLATION LIMIT = 20.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3062
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5863E-01
HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .3061 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 681
*** TIME = .257983E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2580E-04 OSCILLATION LIMIT = 20.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3061
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5986E-01
HT FLOW CONVERGENCE VALUE= .1688E-01 CRITERION= .3058 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 682
*** TIME = .258772E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2589E-04 OSCILLATION LIMIT = 20.42
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3058
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5883E-01
HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3058 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 683
 *** TIME = .259561E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.182 CRITERION= .3058
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5971E-01
 HT FLOW CONVERGENCE VALUE= .1681E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 684
 *** TIME = .260350E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2587E-04 OSCILLATION LIMIT = 20.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5899E-01
 HT FLOW CONVERGENCE VALUE= .1653E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 685
 *** TIME = .261139E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5960E-01
 HT FLOW CONVERGENCE VALUE= .1677E-01 CRITERION= .3052 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 686
 *** TIME = .261928E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2586E-04 OSCILLATION LIMIT = 20.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5911E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 687
 *** TIME = .262717E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5952E-01
 HT FLOW CONVERGENCE VALUE= .1673E-01 CRITERION= .3048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 688
 *** TIME = .263506E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5920E-01
 HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 689
 *** TIME = .264295E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5946E-01
 HT FLOW CONVERGENCE VALUE= .1670E-01 CRITERION= .3045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 690
 *** TIME = .265084E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5928E-01

HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 691
 *** TIME = .265873E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5943E-01
 HT FLOW CONVERGENCE VALUE= .1668E-01 CRITERION= .3042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 692
 *** TIME = .266662E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5933E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3041 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 693
 *** TIME = .267451E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .3039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 694
 *** TIME = .268240E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2583E-04 OSCILLATION LIMIT = 20.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3039
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1655E-01 CRITERION= .3038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 695
 *** TIME = .269029E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5939E-01
 HT FLOW CONVERGENCE VALUE= .1664E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 696
 *** TIME = .269818E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5941E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3035 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 697
 *** TIME = .270606E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3035
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .3032 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 698
 *** TIME = .271395E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5944E-01
 HT FLOW CONVERGENCE VALUE= .1653E-01 CRITERION= .3031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 699
 *** TIME = .272184E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1659E-01 CRITERION= .3029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 700
 *** TIME = .272973E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2582E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3029
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5946E-01
 HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3028 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 701
 *** TIME = .273762E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5938E-01
 HT FLOW CONVERGENCE VALUE= .1658E-01 CRITERION= .3025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 702
 *** TIME = .274551E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5949E-01
 HT FLOW CONVERGENCE VALUE= .1651E-01 CRITERION= .3025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 703
 *** TIME = .275340E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5939E-01
 HT FLOW CONVERGENCE VALUE= .1656E-01 CRITERION= .3022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 704
 *** TIME = .276129E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.866 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5950E-01
 HT FLOW CONVERGENCE VALUE= .1649E-01 CRITERION= .3022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 705
 *** TIME = .276918E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2585E-04 OSCILLATION LIMIT = 20.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.181 CRITERION= .3022
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .3019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 32 COMPLETED. CUM ITER = 706
 *** TIME = .277707E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 1.866      CRITERION= .3019
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5951E-01
  HT FLOW CONVERGENCE VALUE= .1648E-01 CRITERION= .3018 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 33 COMPLETED. CUM ITER = 707
*** TIME = .278496E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 2.181      CRITERION= .3018
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5940E-01
  HT FLOW CONVERGENCE VALUE= .1652E-01 CRITERION= .3015 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 34 COMPLETED. CUM ITER = 708
*** TIME = .279285E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 1.866      CRITERION= .3015
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5952E-01
  HT FLOW CONVERGENCE VALUE= .1646E-01 CRITERION= .3015 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 35 COMPLETED. CUM ITER = 709
*** TIME = .280074E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 2.181      CRITERION= .3015
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5941E-01
  HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .3012 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 36 COMPLETED. CUM ITER = 710
*** TIME = .280863E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 1.866      CRITERION= .3012
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5954E-01
  HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .3012 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 37 COMPLETED. CUM ITER = 711
*** TIME = .281652E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 2.180      CRITERION= .3012
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5943E-01
  HT FLOW CONVERGENCE VALUE= .1649E-01 CRITERION= .3009 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 38 COMPLETED. CUM ITER = 712
*** TIME = .282441E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2581E-04 OSCILLATION LIMIT = 20.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 1.866      CRITERION= .3009
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5955E-01
  HT FLOW CONVERGENCE VALUE= .1644E-01 CRITERION= .3008 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 713
*** TIME = .283229E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2584E-04 OSCILLATION LIMIT = 20.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

  HT FLOW CONVERGENCE VALUE= 2.180      CRITERION= .3008
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5944E-01
  HT FLOW CONVERGENCE VALUE= .1647E-01 CRITERION= .3006 <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 714

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*** TIME = .284018E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2580E-04 OSCILLATION LIMIT = 20.36
 Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09
 TIME= .31558E+09

SELECT FOR ITEM=MAT COMPONENT=
 IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
 22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
 4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
 IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
 IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
 LOAD LABELS = TEMP
 VALUES = 129.27 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
 LOAD LABELS = TEMP
 VALUES = 130.14 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
 LOAD LABELS = TEMP
 VALUES = 132.34 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
 CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 39032.550 TIME= 02:30:32
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
 procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 02:30:32 JUN 19, 1995 CP= 39032.550
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
 TIME AT END OF THE LOAD STEP.31558E+09
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 10
 MAXIMUM NUMBER OF SUBSTEPS 40
 MINIMUM NUMBER OF SUBSTEPS 5
 START WITH TIME STEP FROM PREVIOUS SUBSTEP YES
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25

STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS
 THERMAL DOFS ON
 TRANSIENT INTEGRATION PARAMETERS
 THETA.50000
 OSCILLATION LIMIT CRITERION.50000
 TOLERANCE.20000
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3006
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031E-01
 HT FLOW CONVERGENCE VALUE= .1428E-01 CRITERION= .3005 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 715
 *** TIME = .284807E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2456E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.237 CRITERION= .3005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4983E-01
 HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 716
 *** TIME = .285596E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2447E-04 OSCILLATION LIMIT = 19.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5112E-01
 HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .3003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 717
 *** TIME = .286385E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2466E-04 OSCILLATION LIMIT = 19.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.237 CRITERION= .3003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 718
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2448E-04 OSCILLATION LIMIT = 19.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5099E-01
 HT FLOW CONVERGENCE VALUE= .1427E-01 CRITERION= .3000 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 719
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2464E-04 OSCILLATION LIMIT = 19.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .3000
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5007E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 720
 *** TIME = .288752E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2450E-04 OSCILLATION LIMIT = 19.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5089E-01

HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .2997 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1.
 *** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 721
 *** TIME = .289541E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2463E-04 OSCILLATION LIMIT = 19.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2997
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 722
 *** TIME = .290330E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2451E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2995
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5081E-01
 HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .2994 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 723
 *** TIME = .291119E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2462E-04 OSCILLATION LIMIT = 19.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2994
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5025E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 724
 *** TIME = .291908E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5076E-01
 HT FLOW CONVERGENCE VALUE= .1420E-01 CRITERION= .2992 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 725
 *** TIME = .292697E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2461E-04 OSCILLATION LIMIT = 19.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2992
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 726
 *** TIME = .293486E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5072E-01
 HT FLOW CONVERGENCE VALUE= .1418E-01 CRITERION= .2989 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 727
 *** TIME = .294275E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 19.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5036E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 728
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5070E-01
 HT FLOW CONVERGENCE VALUE= .1416E-01 CRITERION= .2986 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 729
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2460E-04 OSCILLATION LIMIT = 19.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2986
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5040E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2984 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 730
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2984
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
 HT FLOW CONVERGENCE VALUE= .1415E-01 CRITERION= .2983 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 731
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5044E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 732
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
 HT FLOW CONVERGENCE VALUE= .1414E-01 CRITERION= .2981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 733
 *** TIME = .299008E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2981
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5047E-01
 HT FLOW CONVERGENCE VALUE= .1413E-01 CRITERION= .2978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 20 COMPLETED. CUM ITER = 734
 *** TIME = .299797E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .2978 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 21 COMPLETED. CUM ITER = 735
 *** TIME = .300586E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2459E-04 OSCILLATION LIMIT = 19.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5049E-01
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .2975 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 22 COMPLETED. CUM ITER = 736
 *** TIME = .301375E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2975
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2975 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 23 COMPLETED. CUM ITER = 737
*** TIME = .302164E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2975
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5051E-01
HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2973 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 24 COMPLETED. CUM ITER = 738
*** TIME = .302953E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2973
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .2972 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 25 COMPLETED. CUM ITER = 739
*** TIME = .303742E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2972
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5053E-01
HT FLOW CONVERGENCE VALUE= .1411E-01 CRITERION= .2970 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 26 COMPLETED. CUM ITER = 740
*** TIME = .304531E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2970
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .2970 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 741
*** TIME = .305320E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.236 CRITERION= .2970
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5055E-01
HT FLOW CONVERGENCE VALUE= .1410E-01 CRITERION= .2967 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 742
*** TIME = .306109E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2967
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066E-01
HT FLOW CONVERGENCE VALUE= .1408E-01 CRITERION= .2967 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 743
*** TIME = .306898E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2458E-04 OSCILLATION LIMIT = 19.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2967
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5056E-01
HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .2964 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 744

*** TIME = .307687E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2964
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
 HT FLOW CONVERGENCE VALUE= .1407E-01 CRITERION= .2964 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 31 COMPLETED. CUM ITER = 745
 *** TIME = .308476E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2964
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5058E-01
 HT FLOW CONVERGENCE VALUE= .1407E-01 CRITERION= .2962 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 32 COMPLETED. CUM ITER = 746
 *** TIME = .309265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2453E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2962
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5067E-01
 HT FLOW CONVERGENCE VALUE= .1405E-01 CRITERION= .2961 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 33 COMPLETED. CUM ITER = 747
 *** TIME = .310053E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5059E-01
 HT FLOW CONVERGENCE VALUE= .1406E-01 CRITERION= .2959 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 34 COMPLETED. CUM ITER = 748
 *** TIME = .310842E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2959
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
 HT FLOW CONVERGENCE VALUE= .1404E-01 CRITERION= .2959 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 35 COMPLETED. CUM ITER = 749
 *** TIME = .311631E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2959
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5060E-01
 HT FLOW CONVERGENCE VALUE= .1405E-01 CRITERION= .2956 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 36 COMPLETED. CUM ITER = 750
 *** TIME = .312420E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2956
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5068E-01
 HT FLOW CONVERGENCE VALUE= .1403E-01 CRITERION= .2956 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 37 COMPLETED. CUM ITER = 751
 *** TIME = .313209E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2956
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5061E-01
 HT FLOW CONVERGENCE VALUE= .1404E-01 CRITERION= .2953 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 752
*** TIME = .313998E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.922 CRITERION= .2953
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5069E-01
HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .2953 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 753
*** TIME = .314787E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2457E-04 OSCILLATION LIMIT = 19.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 2.235 CRITERION= .2953
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5062E-01
HT FLOW CONVERGENCE VALUE= .1403E-01 CRITERION= .2951 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 754
*** TIME = .315576E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.35
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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 03:08:13 JUN 19, 1995 CP= 41233.850
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 32.51 CRITERION= .2968
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5506
HT FLOW CONVERGENCE VALUE= .1527 CRITERION= .2939 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 755
*** TIME = .323465E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2051E-04 OSCILLATION LIMIT = 161.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.82 CRITERION= .2956
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4956
HT FLOW CONVERGENCE VALUE= .1462 CRITERION= .2925 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 756
*** TIME = .331355E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1950E-04 OSCILLATION LIMIT = 153.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.50 CRITERION= .2942
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4986
HT FLOW CONVERGENCE VALUE= .1457 CRITERION= .2913 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 757
*** TIME = .339244E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.81 CRITERION= .2931
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4999
HT FLOW CONVERGENCE VALUE= .1454 CRITERION= .2899 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 758
*** TIME = .347134E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 32.50 CRITERION= .2917
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4993
 HT FLOW CONVERGENCE VALUE= .1447 CRITERION= .2888 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 759
 *** TIME = .355023E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.81 CRITERION= .2905
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5008
 HT FLOW CONVERGENCE VALUE= .1444 CRITERION= .2874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 760
 *** TIME = .362912E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.49 CRITERION= .2891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5002
 HT FLOW CONVERGENCE VALUE= .1437 CRITERION= .2862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 761
 *** TIME = .370802E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.80 CRITERION= .2880
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017
 HT FLOW CONVERGENCE VALUE= .1434 CRITERION= .2848 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 762
 *** TIME = .378691E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.48 CRITERION= .2866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011
 HT FLOW CONVERGENCE VALUE= .1426 CRITERION= .2836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 763
 *** TIME = .386581E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.79 CRITERION= .2855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5027
 HT FLOW CONVERGENCE VALUE= .1422 CRITERION= .2822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 764
 *** TIME = .394470E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.47 CRITERION= .2841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5021
 HT FLOW CONVERGENCE VALUE= .1415 CRITERION= .2811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 765
 *** TIME = .402359E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1954E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.78 CRITERION= .2829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5036
 HT FLOW CONVERGENCE VALUE= .1411 CRITERION= .2797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 766
 *** TIME = .410249E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.46 CRITERION= .2815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5031
 HT FLOW CONVERGENCE VALUE= .1403 CRITERION= .2785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 767
 *** TIME = .418138E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.77 CRITERION= .2804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5046
 HT FLOW CONVERGENCE VALUE= .1398 CRITERION= .2771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 768
 *** TIME = .426028E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.45 CRITERION= .2790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5041
 HT FLOW CONVERGENCE VALUE= .1389 CRITERION= .2760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 769
 *** TIME = .433917E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.76 CRITERION= .2778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5056
 HT FLOW CONVERGENCE VALUE= .1385 CRITERION= .2746 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 770
 *** TIME = .441806E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.44 CRITERION= .2764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5051
 HT FLOW CONVERGENCE VALUE= .1380 CRITERION= .2734 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 17 COMPLETED. CUM ITER = 771
 *** TIME = .449696E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.75 CRITERION= .2753
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5066
 HT FLOW CONVERGENCE VALUE= .1379 CRITERION= .2720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 18 COMPLETED. CUM ITER = 772
 *** TIME = .457585E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.44 CRITERION= .2739
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5062
 HT FLOW CONVERGENCE VALUE= .1371 CRITERION= .2708 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 19 COMPLETED. CUM ITER = 773
 *** TIME = .465475E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1955E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.75 CRITERION= .2727
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5076
 HT FLOW CONVERGENCE VALUE= .1368 CRITERION= .2694 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 20 COMPLETED. CUM ITER = 774
 *** TIME = .473364E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.43 CRITERION= .2713
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5072
 HT FLOW CONVERGENCE VALUE= .1360 CRITERION= .2683 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 21 COMPLETED. CUM ITER = 775
 *** TIME = .481253E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.74 CRITERION= .2702
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5086
 HT FLOW CONVERGENCE VALUE= .1357 CRITERION= .2669 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 22 COMPLETED. CUM ITER = 776
 *** TIME = .489143E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.42 CRITERION= .2688
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5083
 HT FLOW CONVERGENCE VALUE= .1349 CRITERION= .2657 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 23 COMPLETED. CUM ITER = 777
 *** TIME = .497032E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.73 CRITERION= .2676
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5097
 HT FLOW CONVERGENCE VALUE= .1344 CRITERION= .2643 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 778
 *** TIME = .504922E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.41 CRITERION= .2662
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5094
 HT FLOW CONVERGENCE VALUE= .1335 CRITERION= .2631 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 779
 *** TIME = .512811E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1956E-04 OSCILLATION LIMIT = 154.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.72 CRITERION= .2651
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5108
 HT FLOW CONVERGENCE VALUE= .1327 CRITERION= .2617 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 780
 *** TIME = .520700E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.40 CRITERION= .2637
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5105
 HT FLOW CONVERGENCE VALUE= .1320 CRITERION= .2606 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 781
 *** TIME = .528590E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.71 CRITERION= .2626
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5118

HT FLOW CONVERGENCE VALUE= .1309 CRITERION= .2592 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 782
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.39 CRITERION= .2612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5115
 HT FLOW CONVERGENCE VALUE= .1296 CRITERION= .2580 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 783
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.70 CRITERION= .2600
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5129
 HT FLOW CONVERGENCE VALUE= .1292 CRITERION= .2566 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 784
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.38 CRITERION= .2586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5126
 HT FLOW CONVERGENCE VALUE= .1276 CRITERION= .2554 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 785
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.69 CRITERION= .2575
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5139
 HT FLOW CONVERGENCE VALUE= .1252 CRITERION= .2540 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 786
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.38 CRITERION= .2561
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5136
 HT FLOW CONVERGENCE VALUE= .1243 CRITERION= .2529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 787
 *** TIME = .575926E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1957E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .2549
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5149
 HT FLOW CONVERGENCE VALUE= .1238 CRITERION= .2515 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 788
 *** TIME = .583816E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.37 CRITERION= .2535
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5147
 HT FLOW CONVERGENCE VALUE= .1230 CRITERION= .2503 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 789
 *** TIME = .591705E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .2524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5160
 HT FLOW CONVERGENCE VALUE= .1225 CRITERION= .2489 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 790
 *** TIME = .599594E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.36 CRITERION= .2510
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158
 HT FLOW CONVERGENCE VALUE= .1217 CRITERION= .2477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 791
 *** TIME = .607484E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.67 CRITERION= .2498
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5171
 HT FLOW CONVERGENCE VALUE= .1211 CRITERION= .2463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 792
 *** TIME = .615373E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.35 CRITERION= .2484
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5170
 HT FLOW CONVERGENCE VALUE= .1193 CRITERION= .2452 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 793
 *** TIME = .623263E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1958E-04 OSCILLATION LIMIT = 154.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.66 CRITERION= .2473
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5183
 HT FLOW CONVERGENCE VALUE= .1186 CRITERION= .2438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 794
 *** TIME = .631152E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1959E-04 OSCILLATION LIMIT = 154.6

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:45:53 JUN 19, 1995 CP= 43436.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 44.21 CRITERION= .2477
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4240
 HT FLOW CONVERGENCE VALUE= .1088 CRITERION= .2429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 795
 *** TIME = .639041E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1337E-04 OSCILLATION LIMIT = 105.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.51 CRITERION= .2469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4291
 HT FLOW CONVERGENCE VALUE= .1081 CRITERION= .2418 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 796
 *** TIME = .646931E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1345E-04 OSCILLATION LIMIT = 106.1

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.19 CRITERION= .2458
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4299
 HT FLOW CONVERGENCE VALUE= .1078 CRITERION= .2410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 797
 *** TIME = .654820E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1348E-04 OSCILLATION LIMIT = 106.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.50 CRITERION= .2450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4297
 HT FLOW CONVERGENCE VALUE= .1074 CRITERION= .2399 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 798
 *** TIME = .662710E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1346E-04 OSCILLATION LIMIT = 106.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.18 CRITERION= .2439
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4307
 HT FLOW CONVERGENCE VALUE= .1070 CRITERION= .2391 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 799
 *** TIME = .670599E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1349E-04 OSCILLATION LIMIT = 106.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.48 CRITERION= .2431
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4305
 HT FLOW CONVERGENCE VALUE= .1067 CRITERION= .2380 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 800
 *** TIME = .678488E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1347E-04 OSCILLATION LIMIT = 106.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.16 CRITERION= .2420
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4314
 HT FLOW CONVERGENCE VALUE= .1065 CRITERION= .2372 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 801
 *** TIME = .686378E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 106.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.47 CRITERION= .2412
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4312
 HT FLOW CONVERGENCE VALUE= .1060 CRITERION= .2361 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 802
 *** TIME = .694267E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1348E-04 OSCILLATION LIMIT = 106.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.14 CRITERION= .2402
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4321
 HT FLOW CONVERGENCE VALUE= .1059 CRITERION= .2352 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 803
 *** TIME = .702157E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1350E-04 OSCILLATION LIMIT = 106.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.45 CRITERION= .2394
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4319
 HT FLOW CONVERGENCE VALUE= .1055 CRITERION= .2342 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 804

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*** TIME = .710046E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1349E-04    OSCILLATION LIMIT = 106.4
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.13    CRITERION= .2383
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4328
    HT FLOW CONVERGENCE VALUE= .1051    CRITERION= .2333    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 805
*** TIME = .717935E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1351E-04    OSCILLATION LIMIT = 106.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.43    CRITERION= .2375
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4327
    HT FLOW CONVERGENCE VALUE= .1047    CRITERION= .2323    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 806
*** TIME = .725825E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1349E-04    OSCILLATION LIMIT = 106.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.11    CRITERION= .2364
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4336
    HT FLOW CONVERGENCE VALUE= .1044    CRITERION= .2314    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 807
*** TIME = .733714E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1352E-04    OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.42    CRITERION= .2356
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4335
    HT FLOW CONVERGENCE VALUE= .1037    CRITERION= .2303    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 808
*** TIME = .741604E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1350E-04    OSCILLATION LIMIT = 106.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.10    CRITERION= .2345
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4343
    HT FLOW CONVERGENCE VALUE= .1036    CRITERION= .2295    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 809
*** TIME = .749493E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04    OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.40    CRITERION= .2337
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4342
    HT FLOW CONVERGENCE VALUE= .1031    CRITERION= .2284    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 810
*** TIME = .757382E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1351E-04    OSCILLATION LIMIT = 106.6
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.08    CRITERION= .2326
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4351
    HT FLOW CONVERGENCE VALUE= .1024    CRITERION= .2276    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 811
*** TIME = .765272E+09    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04    OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 44.39    CRITERION= .2318
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4350
    HT FLOW CONVERGENCE VALUE= .1021    CRITERION= .2265    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 812
*** TIME = .773161E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1352E-04 OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.06 CRITERION= .2307
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4359
HT FLOW CONVERGENCE VALUE= .1017 CRITERION= .2257 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 813
*** TIME = .781051E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.37 CRITERION= .2299
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4358
HT FLOW CONVERGENCE VALUE= .1011 CRITERION= .2246 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 814
*** TIME = .788940E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1353E-04 OSCILLATION LIMIT = 106.7
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.05 CRITERION= .2288
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4366
HT FLOW CONVERGENCE VALUE= .1006 CRITERION= .2237 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 815
*** TIME = .796829E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1355E-04 OSCILLATION LIMIT = 106.9
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.35 CRITERION= .2280
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4366
HT FLOW CONVERGENCE VALUE= .1001 CRITERION= .2227 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 816
*** TIME = .804719E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.03 CRITERION= .2270
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4375
HT FLOW CONVERGENCE VALUE= .9987E-01 CRITERION= .2218 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 817
*** TIME = .812608E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.34 CRITERION= .2262
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4374
HT FLOW CONVERGENCE VALUE= .9932E-01 CRITERION= .2208 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 818
*** TIME = .820498E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1354E-04 OSCILLATION LIMIT = 106.8
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.02 CRITERION= .2251
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4382
HT FLOW CONVERGENCE VALUE= .9917E-01 CRITERION= .2199 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 819
*** TIME = .828387E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.32 CRITERION= .2243

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4382
 HT FLOW CONVERGENCE VALUE= .9850E-01 CRITERION= .2188 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 820
 *** TIME = .836276E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1355E-04 OSCILLATION LIMIT = 106.9
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.00 CRITERION= .2232
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4390
 HT FLOW CONVERGENCE VALUE= .9831E-01 CRITERION= .2180 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 821
 *** TIME = .844166E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1357E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.31 CRITERION= .2224
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4390
 HT FLOW CONVERGENCE VALUE= .9788E-01 CRITERION= .2169 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 822
 *** TIME = .852055E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.99 CRITERION= .2213
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4399
 HT FLOW CONVERGENCE VALUE= .9753E-01 CRITERION= .2161 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 823
 *** TIME = .859945E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1358E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.29 CRITERION= .2205
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4399
 HT FLOW CONVERGENCE VALUE= .9717E-01 CRITERION= .2150 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 824
 *** TIME = .867834E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1356E-04 OSCILLATION LIMIT = 107.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.97 CRITERION= .2194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407
 HT FLOW CONVERGENCE VALUE= .9672E-01 CRITERION= .2141 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 825
 *** TIME = .875723E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.27 CRITERION= .2186
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407
 HT FLOW CONVERGENCE VALUE= .9651E-01 CRITERION= .2131 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 826
 *** TIME = .883613E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1357E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.95 CRITERION= .2175
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4414
 HT FLOW CONVERGENCE VALUE= .9607E-01 CRITERION= .2122 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 827
 *** TIME = .891502E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.26 CRITERION= .2167
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4415
 HT FLOW CONVERGENCE VALUE= .9589E-01 CRITERION= .2111 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 828
 *** TIME = .899392E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1358E-04 OSCILLATION LIMIT = 107.1
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.94 CRITERION= .2156
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4423
 HT FLOW CONVERGENCE VALUE= .9524E-01 CRITERION= .2103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 829
 *** TIME = .907281E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.24 CRITERION= .2148
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4424
 HT FLOW CONVERGENCE VALUE= .9523E-01 CRITERION= .2092 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 830
 *** TIME = .915170E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1359E-04 OSCILLATION LIMIT = 107.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.92 CRITERION= .2137
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4432
 HT FLOW CONVERGENCE VALUE= .9468E-01 CRITERION= .2084 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 831
 *** TIME = .923060E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1361E-04 OSCILLATION LIMIT = 107.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.23 CRITERION= .2129
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4433
 HT FLOW CONVERGENCE VALUE= .9403E-01 CRITERION= .2073 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 832
 *** TIME = .930949E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.91 CRITERION= .2119
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4440
 HT FLOW CONVERGENCE VALUE= .9339E-01 CRITERION= .2064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 833
 *** TIME = .938839E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1362E-04 OSCILLATION LIMIT = 107.4
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 44.21 CRITERION= .2111
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4442
 HT FLOW CONVERGENCE VALUE= .9304E-01 CRITERION= .2054 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 834
 *** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1360E-04 OSCILLATION LIMIT = 107.3

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:23:34 JUN 19, 1995 CP= 45640.800
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 51.27 CRITERION= .2117
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3731
 HT FLOW CONVERGENCE VALUE= .8684E-01 CRITERION= .2047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 835
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9148E-05 OSCILLATION LIMIT = 72.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.58 CRITERION= .2111
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3759
 HT FLOW CONVERGENCE VALUE= .8647E-01 CRITERION= .2039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 836
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9184E-05 OSCILLATION LIMIT = 72.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.25 CRITERION= .2102
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3775
 HT FLOW CONVERGENCE VALUE= .8613E-01 CRITERION= .2033 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 837
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9238E-05 OSCILLATION LIMIT = 72.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.56 CRITERION= .2097
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3764
 HT FLOW CONVERGENCE VALUE= .8603E-01 CRITERION= .2024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 838
 *** TIME = .978286E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9192E-05 OSCILLATION LIMIT = 72.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.23 CRITERION= .2088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3781
 HT FLOW CONVERGENCE VALUE= .8582E-01 CRITERION= .2018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 839
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9245E-05 OSCILLATION LIMIT = 72.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.53 CRITERION= .2082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3771
 HT FLOW CONVERGENCE VALUE= .8531E-01 CRITERION= .2010 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 840
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9202E-05 OSCILLATION LIMIT = 72.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.21 CRITERION= .2074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3787
 HT FLOW CONVERGENCE VALUE= .8516E-01 CRITERION= .2004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 841
 *** TIME = .100195E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9255E-05 OSCILLATION LIMIT = 73.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.51 CRITERION= .2068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3778
 HT FLOW CONVERGENCE VALUE= .8475E-01 CRITERION= .1995 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 842
*** TIME = .100984E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9213E-05 OSCILLATION LIMIT = 72.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.19 CRITERION= .2060
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3793
HT FLOW CONVERGENCE VALUE= .8460E-01 CRITERION= .1989 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 843
*** TIME = .101773E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9263E-05 OSCILLATION LIMIT = 73.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.49 CRITERION= .2054
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3783
HT FLOW CONVERGENCE VALUE= .8426E-01 CRITERION= .1981 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 844
*** TIME = .102562E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9222E-05 OSCILLATION LIMIT = 72.75
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.17 CRITERION= .2046
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3798
HT FLOW CONVERGENCE VALUE= .8380E-01 CRITERION= .1975 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 845
*** TIME = .103351E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9270E-05 OSCILLATION LIMIT = 73.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.47 CRITERION= .2040
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3788
HT FLOW CONVERGENCE VALUE= .8373E-01 CRITERION= .1966 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 846
*** TIME = .104140E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9230E-05 OSCILLATION LIMIT = 72.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.14 CRITERION= .2031
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802
HT FLOW CONVERGENCE VALUE= .8359E-01 CRITERION= .1960 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 847
*** TIME = .104929E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9277E-05 OSCILLATION LIMIT = 73.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.45 CRITERION= .2026
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3794
HT FLOW CONVERGENCE VALUE= .8328E-01 CRITERION= .1952 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 848
*** TIME = .105718E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9238E-05 OSCILLATION LIMIT = 72.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.12 CRITERION= .2017
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3808
HT FLOW CONVERGENCE VALUE= .8295E-01 CRITERION= .1945 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 849
*** TIME = .106507E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9285E-05 OSCILLATION LIMIT = 73.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.43 CRITERION= .2012
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3799

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HT FLOW CONVERGENCE VALUE= .8275E-01 CRITERION= .1937 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 850
 *** TIME = .107296E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9247E-05 OSCILLATION LIMIT = 72.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.10 CRITERION= .2003
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3813
 HT FLOW CONVERGENCE VALUE= .8279E-01 CRITERION= .1931 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 851
 *** TIME = .108085E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9293E-05 OSCILLATION LIMIT = 73.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.40 CRITERION= .1998
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3805
 HT FLOW CONVERGENCE VALUE= .8275E-01 CRITERION= .1922 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 852
 *** TIME = .108874E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9257E-05 OSCILLATION LIMIT = 73.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.08 CRITERION= .1989
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3818
 HT FLOW CONVERGENCE VALUE= .8276E-01 CRITERION= .1916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 853
 *** TIME = .109663E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9303E-05 OSCILLATION LIMIT = 73.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.38 CRITERION= .1983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3810
 HT FLOW CONVERGENCE VALUE= .8251E-01 CRITERION= .1908 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 854
 *** TIME = .110452E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9266E-05 OSCILLATION LIMIT = 73.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.06 CRITERION= .1975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3824
 HT FLOW CONVERGENCE VALUE= .8243E-01 CRITERION= .1902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 855
 *** TIME = .111241E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9310E-05 OSCILLATION LIMIT = 73.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.36 CRITERION= .1969
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3816
 HT FLOW CONVERGENCE VALUE= .8206E-01 CRITERION= .1893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 856
 *** TIME = .112029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9276E-05 OSCILLATION LIMIT = 73.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.04 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3829
 HT FLOW CONVERGENCE VALUE= .8218E-01 CRITERION= .1887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 857
 *** TIME = .112818E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9319E-05 OSCILLATION LIMIT = 73.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.34 CRITERION= .1955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3822
 HT FLOW CONVERGENCE VALUE= .8200E-01 CRITERION= .1879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 858
 *** TIME = .113607E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9285E-05 OSCILLATION LIMIT = 73.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.02 CRITERION= .1947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3834
 HT FLOW CONVERGENCE VALUE= .8183E-01 CRITERION= .1872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 859
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9326E-05 OSCILLATION LIMIT = 73.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.32 CRITERION= .1941
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3827
 HT FLOW CONVERGENCE VALUE= .8175E-01 CRITERION= .1864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 860
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9293E-05 OSCILLATION LIMIT = 73.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.99 CRITERION= .1932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3839
 HT FLOW CONVERGENCE VALUE= .8165E-01 CRITERION= .1858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 861
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9332E-05 OSCILLATION LIMIT = 73.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.30 CRITERION= .1927
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3832
 HT FLOW CONVERGENCE VALUE= .8148E-01 CRITERION= .1849 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 862
 *** TIME = .116763E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9301E-05 OSCILLATION LIMIT = 73.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.97 CRITERION= .1918
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3845
 HT FLOW CONVERGENCE VALUE= .8130E-01 CRITERION= .1843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 863
 *** TIME = .117552E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9342E-05 OSCILLATION LIMIT = 73.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.27 CRITERION= .1913
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3838
 HT FLOW CONVERGENCE VALUE= .8101E-01 CRITERION= .1835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 864
 *** TIME = .118341E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9311E-05 OSCILLATION LIMIT = 73.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.95 CRITERION= .1904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3850
 HT FLOW CONVERGENCE VALUE= .8088E-01 CRITERION= .1829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 865
 *** TIME = .119130E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9350E-05 OSCILLATION LIMIT = 73.77

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.25 CRITERION= .1899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3844
 HT FLOW CONVERGENCE VALUE= .8032E-01 CRITERION= .1820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 866
 *** TIME = .119919E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9319E-05 OSCILLATION LIMIT = 73.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.93 CRITERION= .1890
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3856
 HT FLOW CONVERGENCE VALUE= .8019E-01 CRITERION= .1814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 867
 *** TIME = .120708E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9357E-05 OSCILLATION LIMIT = 73.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.23 CRITERION= .1884
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3850
 HT FLOW CONVERGENCE VALUE= .7985E-01 CRITERION= .1806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 868
 *** TIME = .121497E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9328E-05 OSCILLATION LIMIT = 73.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.91 CRITERION= .1876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3861
 HT FLOW CONVERGENCE VALUE= .7955E-01 CRITERION= .1799 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 869
 *** TIME = .122286E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9366E-05 OSCILLATION LIMIT = 73.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.21 CRITERION= .1870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3855
 HT FLOW CONVERGENCE VALUE= .7913E-01 CRITERION= .1791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 870
 *** TIME = .123075E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9338E-05 OSCILLATION LIMIT = 73.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.89 CRITERION= .1862
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3867
 HT FLOW CONVERGENCE VALUE= .7895E-01 CRITERION= .1785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 871
 *** TIME = .123864E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9375E-05 OSCILLATION LIMIT = 73.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.19 CRITERION= .1856
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3862
 HT FLOW CONVERGENCE VALUE= .7883E-01 CRITERION= .1776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 872
 *** TIME = .124653E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9348E-05 OSCILLATION LIMIT = 73.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 50.86 CRITERION= .1848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873
 HT FLOW CONVERGENCE VALUE= .7863E-01 CRITERION= .1770 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 873

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*** TIME = .125441E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9383E-05    OSCILLATION LIMIT = 74.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

HT FLOW CONVERGENCE VALUE= 51.17    CRITERION= .1842
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3868
HT FLOW CONVERGENCE VALUE= .7822E-01    CRITERION= .1762    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 40 COMPLETED.    CUM ITER = 874
*** TIME = .126230E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9357E-05    OSCILLATION LIMIT = 73.82

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303    VERSION=HP 9000/7XX    05:01:17 JUN 19, 1995 CP= 47845.260
FOR SUPPORT CALL ROBERT BAHNEY    PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 43.22    CRITERION= .1814
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3149
HT FLOW CONVERGENCE VALUE= .6484E-01    CRITERION= .1757    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 1 COMPLETED.    CUM ITER = 875
*** TIME = .127019E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8830E-05    OSCILLATION LIMIT = 69.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 43.52    CRITERION= .1809
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3191
HT FLOW CONVERGENCE VALUE= .6493E-01    CRITERION= .1750    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 2 COMPLETED.    CUM ITER = 876
*** TIME = .127808E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8937E-05    OSCILLATION LIMIT = 70.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 43.20    CRITERION= .1802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3210
HT FLOW CONVERGENCE VALUE= .6473E-01    CRITERION= .1745    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 3 COMPLETED.    CUM ITER = 877
*** TIME = .128597E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9019E-05    OSCILLATION LIMIT = 71.16
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 43.51    CRITERION= .1798
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3192
HT FLOW CONVERGENCE VALUE= .6449E-01    CRITERION= .1738    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 4 COMPLETED.    CUM ITER = 878
*** TIME = .129386E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8937E-05    OSCILLATION LIMIT = 70.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 43.18    CRITERION= .1791
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3214
HT FLOW CONVERGENCE VALUE= .6440E-01    CRITERION= .1733    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 5 COMPLETED.    CUM ITER = 879
*** TIME = .130175E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9025E-05    OSCILLATION LIMIT = 71.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 43.49    CRITERION= .1786
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3196
HT FLOW CONVERGENCE VALUE= .6398E-01    CRITERION= .1726    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 880
*** TIME = .130964E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8945E-05 OSCILLATION LIMIT = 70.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.17 CRITERION= .1779
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3217
HT FLOW CONVERGENCE VALUE= .6405E-01 CRITERION= .1721 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 881
*** TIME = .131753E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9030E-05 OSCILLATION LIMIT = 71.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.47 CRITERION= .1775
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3200
HT FLOW CONVERGENCE VALUE= .6370E-01 CRITERION= .1714 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 882
*** TIME = .132542E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8953E-05 OSCILLATION LIMIT = 70.63
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.15 CRITERION= .1767
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3221
HT FLOW CONVERGENCE VALUE= .6346E-01 CRITERION= .1709 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 883
*** TIME = .133331E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9036E-05 OSCILLATION LIMIT = 71.29
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.46 CRITERION= .1763
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3204
HT FLOW CONVERGENCE VALUE= .6330E-01 CRITERION= .1702 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 884
*** TIME = .134120E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8960E-05 OSCILLATION LIMIT = 70.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.14 CRITERION= .1756
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3224
HT FLOW CONVERGENCE VALUE= .6345E-01 CRITERION= .1697 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 885
*** TIME = .134909E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9041E-05 OSCILLATION LIMIT = 71.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.44 CRITERION= .1751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3209
HT FLOW CONVERGENCE VALUE= .6310E-01 CRITERION= .1690 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 886
*** TIME = .135698E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8969E-05 OSCILLATION LIMIT = 70.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.12 CRITERION= .1744
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3228
HT FLOW CONVERGENCE VALUE= .6287E-01 CRITERION= .1685 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 887
*** TIME = .136487E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .9048E-05 OSCILLATION LIMIT = 71.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.43 CRITERION= .1740

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3213
 HT FLOW CONVERGENCE VALUE= .6235E-01 CRITERION= .1678 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 888
 *** TIME = .137276E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8977E-05 OSCILLATION LIMIT = 70.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.11 CRITERION= .1732
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3232
 HT FLOW CONVERGENCE VALUE= .6246E-01 CRITERION= .1673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 889
 *** TIME = .138065E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9054E-05 OSCILLATION LIMIT = 71.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.41 CRITERION= .1728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3217
 HT FLOW CONVERGENCE VALUE= .6211E-01 CRITERION= .1666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 890
 *** TIME = .138853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8984E-05 OSCILLATION LIMIT = 70.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.09 CRITERION= .1721
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3235
 HT FLOW CONVERGENCE VALUE= .6219E-01 CRITERION= .1661 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 891
 *** TIME = .139642E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9060E-05 OSCILLATION LIMIT = 71.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.40 CRITERION= .1716
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3221
 HT FLOW CONVERGENCE VALUE= .6207E-01 CRITERION= .1654 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 892
 *** TIME = .140431E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8993E-05 OSCILLATION LIMIT = 70.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.07 CRITERION= .1709
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3239
 HT FLOW CONVERGENCE VALUE= .6189E-01 CRITERION= .1649 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 893
 *** TIME = .141220E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9066E-05 OSCILLATION LIMIT = 71.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.38 CRITERION= .1705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3225
 HT FLOW CONVERGENCE VALUE= .6185E-01 CRITERION= .1642 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 894
 *** TIME = .142009E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9000E-05 OSCILLATION LIMIT = 71.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.06 CRITERION= .1698
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3243
 HT FLOW CONVERGENCE VALUE= .6251E-01 CRITERION= .1637 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 895
 *** TIME = .142798E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9071E-05 OSCILLATION LIMIT = 71.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.36 CRITERION= .1693
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3230
 HT FLOW CONVERGENCE VALUE= .6264E-01 CRITERION= .1630 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 896
 *** TIME = .143587E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9008E-05 OSCILLATION LIMIT = 71.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.04 CRITERION= .1686
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3247
 HT FLOW CONVERGENCE VALUE= .6248E-01 CRITERION= .1625 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 897
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9078E-05 OSCILLATION LIMIT = 71.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.35 CRITERION= .1682
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3234
 HT FLOW CONVERGENCE VALUE= .6205E-01 CRITERION= .1618 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 898
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9015E-05 OSCILLATION LIMIT = 71.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.03 CRITERION= .1674
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3250
 HT FLOW CONVERGENCE VALUE= .6204E-01 CRITERION= .1613 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 899
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9083E-05 OSCILLATION LIMIT = 71.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.33 CRITERION= .1670
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3237
 HT FLOW CONVERGENCE VALUE= .6162E-01 CRITERION= .1606 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 900
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9023E-05 OSCILLATION LIMIT = 71.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.01 CRITERION= .1663
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3254
 HT FLOW CONVERGENCE VALUE= .6148E-01 CRITERION= .1601 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 901
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9088E-05 OSCILLATION LIMIT = 71.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.32 CRITERION= .1658
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3241
 HT FLOW CONVERGENCE VALUE= .6097E-01 CRITERION= .1594 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 902
 *** TIME = .148321E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9030E-05 OSCILLATION LIMIT = 71.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.00 CRITERION= .1651
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3257
 HT FLOW CONVERGENCE VALUE= .6084E-01 CRITERION= .1589 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 903
 *** TIME = .149110E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .9095E-05 OSCILLATION LIMIT = 71.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.30 CRITERION= .1647
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3245
 HT FLOW CONVERGENCE VALUE= .6027E-01 CRITERION= .1582 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 904
 *** TIME = .149899E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9038E-05 OSCILLATION LIMIT = 71.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.98 CRITERION= .1639
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3261
 HT FLOW CONVERGENCE VALUE= .6004E-01 CRITERION= .1577 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 905
 *** TIME = .150688E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9102E-05 OSCILLATION LIMIT = 71.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.29 CRITERION= .1635
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3249
 HT FLOW CONVERGENCE VALUE= .5954E-01 CRITERION= .1570 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 906
 *** TIME = .151476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9048E-05 OSCILLATION LIMIT = 71.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.97 CRITERION= .1628
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3265
 HT FLOW CONVERGENCE VALUE= .5833E-01 CRITERION= .1565 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 907
 *** TIME = .152265E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9110E-05 OSCILLATION LIMIT = 71.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.27 CRITERION= .1624
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3254
 HT FLOW CONVERGENCE VALUE= .5765E-01 CRITERION= .1558 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 908
 *** TIME = .153054E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9058E-05 OSCILLATION LIMIT = 71.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.95 CRITERION= .1616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3269
 HT FLOW CONVERGENCE VALUE= .5750E-01 CRITERION= .1553 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 909
 *** TIME = .153843E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9118E-05 OSCILLATION LIMIT = 71.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.26 CRITERION= .1612
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3258
 HT FLOW CONVERGENCE VALUE= .5726E-01 CRITERION= .1546 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 910
 *** TIME = .154632E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9067E-05 OSCILLATION LIMIT = 71.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.93 CRITERION= .1605
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3272
 HT FLOW CONVERGENCE VALUE= .5717E-01 CRITERION= .1541 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 911
 *** TIME = .155421E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9125E-05 OSCILLATION LIMIT = 71.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.24 CRITERION= .1600
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3262
 HT FLOW CONVERGENCE VALUE= .5688E-01 CRITERION= .1534 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 912
 *** TIME = .156210E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9075E-05 OSCILLATION LIMIT = 71.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.92 CRITERION= .1593
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3276
 HT FLOW CONVERGENCE VALUE= .5692E-01 CRITERION= .1529 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 913
 *** TIME = .156999E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9131E-05 OSCILLATION LIMIT = 72.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 43.22 CRITERION= .1589
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3266
 HT FLOW CONVERGENCE VALUE= .5655E-01 CRITERION= .1522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 914
 *** TIME = .157788E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .9083E-05 OSCILLATION LIMIT = 71.66

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:38:57 JUN 19, 1995 CP= 50048.720
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 35.44 CRITERION= .1563
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2553
 HT FLOW CONVERGENCE VALUE= .4478E-01 CRITERION= .1519 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 915
 *** TIME = .158577E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8404E-05 OSCILLATION LIMIT = 66.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.75 CRITERION= .1560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2583
 HT FLOW CONVERGENCE VALUE= .4479E-01 CRITERION= .1513 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 916
 *** TIME = .159366E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8488E-05 OSCILLATION LIMIT = 66.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.43 CRITERION= .1554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2606
 HT FLOW CONVERGENCE VALUE= .4501E-01 CRITERION= .1509 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 917
 *** TIME = .160155E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8609E-05 OSCILLATION LIMIT = 67.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.74 CRITERION= .1551
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2584

HT FLOW CONVERGENCE VALUE= .4467E-01 CRITERION= .1504 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 918
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8489E-05 OSCILLATION LIMIT = 66.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.42 CRITERION= .1545
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2609
 HT FLOW CONVERGENCE VALUE= .4476E-01 CRITERION= .1500 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 919
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8613E-05 OSCILLATION LIMIT = 67.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.73 CRITERION= .1542
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2587
 HT FLOW CONVERGENCE VALUE= .4438E-01 CRITERION= .1494 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 920
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8496E-05 OSCILLATION LIMIT = 67.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.41 CRITERION= .1536
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2611
 HT FLOW CONVERGENCE VALUE= .4434E-01 CRITERION= .1491 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 921
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8617E-05 OSCILLATION LIMIT = 67.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.72 CRITERION= .1533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2589
 HT FLOW CONVERGENCE VALUE= .4406E-01 CRITERION= .1485 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 922
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8503E-05 OSCILLATION LIMIT = 67.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.40 CRITERION= .1527
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2613
 HT FLOW CONVERGENCE VALUE= .4404E-01 CRITERION= .1481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 923
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8621E-05 OSCILLATION LIMIT = 68.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.71 CRITERION= .1523
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2592
 HT FLOW CONVERGENCE VALUE= .4376E-01 CRITERION= .1476 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 924
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8511E-05 OSCILLATION LIMIT = 67.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.39 CRITERION= .1517
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2615
 HT FLOW CONVERGENCE VALUE= .4381E-01 CRITERION= .1472 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 925
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8625E-05 OSCILLATION LIMIT = 68.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.70 CRITERION= .1514
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2595
 HT FLOW CONVERGENCE VALUE= .4352E-01 CRITERION= .1466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 926
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8519E-05 OSCILLATION LIMIT = 67.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.38 CRITERION= .1508
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2617
 HT FLOW CONVERGENCE VALUE= .4346E-01 CRITERION= .1463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 927
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8630E-05 OSCILLATION LIMIT = 68.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.69 CRITERION= .1505
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2598
 HT FLOW CONVERGENCE VALUE= .4307E-01 CRITERION= .1457 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 928
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8527E-05 OSCILLATION LIMIT = 67.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.37 CRITERION= .1499
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2619
 HT FLOW CONVERGENCE VALUE= .4296E-01 CRITERION= .1453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 929
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8635E-05 OSCILLATION LIMIT = 68.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.68 CRITERION= .1496
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2601
 HT FLOW CONVERGENCE VALUE= .4266E-01 CRITERION= .1448 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 930
 *** TIME = .170411E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8535E-05 OSCILLATION LIMIT = 67.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.36 CRITERION= .1490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2622
 HT FLOW CONVERGENCE VALUE= .4263E-01 CRITERION= .1444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 931
 *** TIME = .171200E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8640E-05 OSCILLATION LIMIT = 68.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.67 CRITERION= .1487
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2603
 HT FLOW CONVERGENCE VALUE= .4234E-01 CRITERION= .1438 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 932
 *** TIME = .171989E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8543E-05 OSCILLATION LIMIT = 67.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.35 CRITERION= .1481
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2624
 HT FLOW CONVERGENCE VALUE= .4191E-01 CRITERION= .1435 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 933
 *** TIME = .172778E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8645E-05 OSCILLATION LIMIT = 68.21

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.65 CRITERION= .1478
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2606
 HT FLOW CONVERGENCE VALUE= .4155E-01 CRITERION= .1429 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 934
 *** TIME = .173567E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8551E-05 OSCILLATION LIMIT = 67.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.34 CRITERION= .1472
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2626
 HT FLOW CONVERGENCE VALUE= .4165E-01 CRITERION= .1425 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 935
 *** TIME = .174356E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8651E-05 OSCILLATION LIMIT = 68.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.64 CRITERION= .1469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2609
 HT FLOW CONVERGENCE VALUE= .4079E-01 CRITERION= .1420 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 936
 *** TIME = .175145E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8559E-05 OSCILLATION LIMIT = 67.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.33 CRITERION= .1463
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2628
 HT FLOW CONVERGENCE VALUE= .3994E-01 CRITERION= .1416 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 937
 *** TIME = .175934E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8656E-05 OSCILLATION LIMIT = 68.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.63 CRITERION= .1460
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2612
 HT FLOW CONVERGENCE VALUE= .3964E-01 CRITERION= .1410 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 938
 *** TIME = .176723E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8568E-05 OSCILLATION LIMIT = 67.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.31 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2631
 HT FLOW CONVERGENCE VALUE= .3944E-01 CRITERION= .1407 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 939
 *** TIME = .177512E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8662E-05 OSCILLATION LIMIT = 68.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.62 CRITERION= .1451
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2615
 HT FLOW CONVERGENCE VALUE= .3907E-01 CRITERION= .1401 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 940
 *** TIME = .178300E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8576E-05 OSCILLATION LIMIT = 67.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.30 CRITERION= .1445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2633
 HT FLOW CONVERGENCE VALUE= .3891E-01 CRITERION= .1397 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 941

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*** TIME = .179089E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8669E-05    OSCILLATION LIMIT = 68.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.61    CRITERION= .1442
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2618
    HT FLOW CONVERGENCE VALUE= .3826E-01 CRITERION= .1392    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 942
*** TIME = .179878E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8585E-05    OSCILLATION LIMIT = 67.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.29    CRITERION= .1436
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2636
    HT FLOW CONVERGENCE VALUE= .3788E-01 CRITERION= .1388    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 943
*** TIME = .180667E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8674E-05    OSCILLATION LIMIT = 68.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.60    CRITERION= .1433
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2621
    HT FLOW CONVERGENCE VALUE= .3706E-01 CRITERION= .1382    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 944
*** TIME = .181456E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8593E-05    OSCILLATION LIMIT = 67.79
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.28    CRITERION= .1427
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2638
    HT FLOW CONVERGENCE VALUE= .3704E-01 CRITERION= .1379    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 945
*** TIME = .182245E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8681E-05    OSCILLATION LIMIT = 68.49
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.59    CRITERION= .1423
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2624
    HT FLOW CONVERGENCE VALUE= .3683E-01 CRITERION= .1373    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 32 COMPLETED. CUM ITER = 946
*** TIME = .183034E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8601E-05    OSCILLATION LIMIT = 67.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.27    CRITERION= .1417
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2640
    HT FLOW CONVERGENCE VALUE= .3680E-01 CRITERION= .1369    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 33 COMPLETED. CUM ITER = 947
*** TIME = .183823E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8686E-05    OSCILLATION LIMIT = 68.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.58    CRITERION= .1414
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2627
    HT FLOW CONVERGENCE VALUE= .3659E-01 CRITERION= .1364    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 34 COMPLETED. CUM ITER = 948
*** TIME = .184612E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8608E-05    OSCILLATION LIMIT = 67.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 35.26    CRITERION= .1408
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2643
    HT FLOW CONVERGENCE VALUE= .3640E-01 CRITERION= .1360    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 35 COMPLETED. CUM ITER = 949
*** TIME = .185401E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8691E-05 OSCILLATION LIMIT = 68.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.57 CRITERION= .1405
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2629
HT FLOW CONVERGENCE VALUE= .3608E-01 CRITERION= .1354 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 36 COMPLETED. CUM ITER = 950
*** TIME = .186190E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8616E-05 OSCILLATION LIMIT = 67.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.25 CRITERION= .1399
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2645
HT FLOW CONVERGENCE VALUE= .3605E-01 CRITERION= .1351 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 37 COMPLETED. CUM ITER = 951
*** TIME = .186979E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8697E-05 OSCILLATION LIMIT = 68.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.56 CRITERION= .1396
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2632
HT FLOW CONVERGENCE VALUE= .3586E-01 CRITERION= .1345 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 38 COMPLETED. CUM ITER = 952
*** TIME = .187768E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8624E-05 OSCILLATION LIMIT = 68.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.24 CRITERION= .1390
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2648
HT FLOW CONVERGENCE VALUE= .3582E-01 CRITERION= .1341 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 953
*** TIME = .188557E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8702E-05 OSCILLATION LIMIT = 68.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 35.55 CRITERION= .1387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2635
HT FLOW CONVERGENCE VALUE= .3563E-01 CRITERION= .1335 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 954
*** TIME = .189346E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8632E-05 OSCILLATION LIMIT = 68.10

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 06:16:34 JUN 19, 1995 CP= 52250.240
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 29.66 CRITERION= .1368
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2137
HT FLOW CONVERGENCE VALUE= .2928E-01 CRITERION= .1333 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 955
*** TIME = .190135E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8184E-05 OSCILLATION LIMIT = 64.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.97 CRITERION= .1366

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2149
 HT FLOW CONVERGENCE VALUE= .2923E-01 CRITERION= .1328 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 956
 *** TIME = .190923E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8206E-05 OSCILLATION LIMIT = 64.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.65 CRITERION= .1361
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2171
 HT FLOW CONVERGENCE VALUE= .2929E-01 CRITERION= .1325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 957
 *** TIME = .191712E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8342E-05 OSCILLATION LIMIT = 65.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.96 CRITERION= .1358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2150
 HT FLOW CONVERGENCE VALUE= .2908E-01 CRITERION= .1320 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 958
 *** TIME = .192501E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8209E-05 OSCILLATION LIMIT = 64.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64 CRITERION= .1353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2173
 HT FLOW CONVERGENCE VALUE= .2913E-01 CRITERION= .1318 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 959
 *** TIME = .193290E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8346E-05 OSCILLATION LIMIT = 65.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.95 CRITERION= .1351
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2152
 HT FLOW CONVERGENCE VALUE= .2893E-01 CRITERION= .1313 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 960
 *** TIME = .194079E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8215E-05 OSCILLATION LIMIT = 64.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63 CRITERION= .1346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2174
 HT FLOW CONVERGENCE VALUE= .2898E-01 CRITERION= .1310 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 961
 *** TIME = .194868E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8349E-05 OSCILLATION LIMIT = 65.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.94 CRITERION= .1344
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2154
 HT FLOW CONVERGENCE VALUE= .2878E-01 CRITERION= .1305 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 962
 *** TIME = .195657E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8222E-05 OSCILLATION LIMIT = 64.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63 CRITERION= .1339
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2175
 HT FLOW CONVERGENCE VALUE= .2882E-01 CRITERION= .1303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 963
 *** TIME = .196446E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8352E-05 OSCILLATION LIMIT = 65.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.94 CRITERION= .1336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2156
 HT FLOW CONVERGENCE VALUE= .2863E-01 CRITERION= .1298 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 964
 *** TIME = .197235E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8229E-05 OSCILLATION LIMIT = 64.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.62 CRITERION= .1331
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2177
 HT FLOW CONVERGENCE VALUE= .2866E-01 CRITERION= .1295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 965
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8355E-05 OSCILLATION LIMIT = 65.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.93 CRITERION= .1329
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2158
 HT FLOW CONVERGENCE VALUE= .2848E-01 CRITERION= .1290 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 966
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8236E-05 OSCILLATION LIMIT = 64.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1324
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2178
 HT FLOW CONVERGENCE VALUE= .2851E-01 CRITERION= .1288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 967
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8359E-05 OSCILLATION LIMIT = 65.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.92 CRITERION= .1322
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2160
 HT FLOW CONVERGENCE VALUE= .2832E-01 CRITERION= .1283 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 968
 *** TIME = .200391E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8244E-05 OSCILLATION LIMIT = 65.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1316
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2180
 HT FLOW CONVERGENCE VALUE= .2836E-01 CRITERION= .1280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 969
 *** TIME = .201180E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8363E-05 OSCILLATION LIMIT = 65.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.91 CRITERION= .1314
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2162
 HT FLOW CONVERGENCE VALUE= .2818E-01 CRITERION= .1275 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 970
 *** TIME = .201969E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8250E-05 OSCILLATION LIMIT = 65.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1309
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2181
 HT FLOW CONVERGENCE VALUE= .2820E-01 CRITERION= .1272 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 971
 *** TIME = .202758E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .8366E-05  OSCILLATION LIMIT = 66.01
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.91      CRITERION= .1307
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2164
  HT FLOW CONVERGENCE VALUE= .2802E-01 CRITERION= .1268    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 972
*** TIME = .203547E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8257E-05  OSCILLATION LIMIT = 65.14
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.59      CRITERION= .1302
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2183
  HT FLOW CONVERGENCE VALUE= .2803E-01 CRITERION= .1265    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 973
*** TIME = .204335E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8370E-05  OSCILLATION LIMIT = 66.04
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.90      CRITERION= .1299
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2166
  HT FLOW CONVERGENCE VALUE= .2784E-01 CRITERION= .1260    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 974
*** TIME = .205124E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8264E-05  OSCILLATION LIMIT = 65.20
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.58      CRITERION= .1294
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2184
  HT FLOW CONVERGENCE VALUE= .2785E-01 CRITERION= .1257    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 975
*** TIME = .205913E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8374E-05  OSCILLATION LIMIT = 66.07
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.89      CRITERION= .1292
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2168
  HT FLOW CONVERGENCE VALUE= .2768E-01 CRITERION= .1253    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 976
*** TIME = .206702E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8271E-05  OSCILLATION LIMIT = 65.25
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.57      CRITERION= .1287
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2186
  HT FLOW CONVERGENCE VALUE= .2767E-01 CRITERION= .1250    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 977
*** TIME = .207491E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8378E-05  OSCILLATION LIMIT = 66.10
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.88      CRITERION= .1285
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2170
  HT FLOW CONVERGENCE VALUE= .2751E-01 CRITERION= .1245    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 978
*** TIME = .208280E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .8278E-05  OSCILLATION LIMIT = 65.31
*** AUTO STEP TIME:  NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 29.57      CRITERION= .1280
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2187
  HT FLOW CONVERGENCE VALUE= .2751E-01 CRITERION= .1242    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 979
 *** TIME = .209069E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8382E-05 OSCILLATION LIMIT = 66.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.88 CRITERION= .1277
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2172
 HT FLOW CONVERGENCE VALUE= .2734E-01 CRITERION= .1237 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 980
 *** TIME = .209858E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8285E-05 OSCILLATION LIMIT = 65.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.56 CRITERION= .1272
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2189
 HT FLOW CONVERGENCE VALUE= .2733E-01 CRITERION= .1235 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 981
 *** TIME = .210647E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8386E-05 OSCILLATION LIMIT = 66.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.87 CRITERION= .1270
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2174
 HT FLOW CONVERGENCE VALUE= .2718E-01 CRITERION= .1230 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 982
 *** TIME = .211436E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8291E-05 OSCILLATION LIMIT = 65.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2190
 HT FLOW CONVERGENCE VALUE= .2717E-01 CRITERION= .1227 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 983
 *** TIME = .212225E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8389E-05 OSCILLATION LIMIT = 66.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.86 CRITERION= .1263
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2176
 HT FLOW CONVERGENCE VALUE= .2702E-01 CRITERION= .1222 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 984
 *** TIME = .213014E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8298E-05 OSCILLATION LIMIT = 65.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1258
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2192
 HT FLOW CONVERGENCE VALUE= .2701E-01 CRITERION= .1220 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 985
 *** TIME = .213803E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8394E-05 OSCILLATION LIMIT = 66.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.85 CRITERION= .1255
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2178
 HT FLOW CONVERGENCE VALUE= .2686E-01 CRITERION= .1215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 986
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8305E-05 OSCILLATION LIMIT = 65.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1250
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2194

HT FLOW CONVERGENCE VALUE= .2685E-01 CRITERION= .1212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 987
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8398E-05 OSCILLATION LIMIT = 66.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.85 CRITERION= .1248
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2180
 HT FLOW CONVERGENCE VALUE= .2670E-01 CRITERION= .1207 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 988
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8312E-05 OSCILLATION LIMIT = 65.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .1243
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2195
 HT FLOW CONVERGENCE VALUE= .2667E-01 CRITERION= .1204 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 989
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8402E-05 OSCILLATION LIMIT = 66.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .1241
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2182
 HT FLOW CONVERGENCE VALUE= .2653E-01 CRITERION= .1200 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 990
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8318E-05 OSCILLATION LIMIT = 65.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1235
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2197
 HT FLOW CONVERGENCE VALUE= .2649E-01 CRITERION= .1197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 991
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8406E-05 OSCILLATION LIMIT = 66.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.83 CRITERION= .1233
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2184
 HT FLOW CONVERGENCE VALUE= .2634E-01 CRITERION= .1192 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 992
 *** TIME = .219325E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8324E-05 OSCILLATION LIMIT = 65.67
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.51 CRITERION= .1228
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2198
 HT FLOW CONVERGENCE VALUE= .2627E-01 CRITERION= .1189 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 993
 *** TIME = .220114E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8410E-05 OSCILLATION LIMIT = 66.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.82 CRITERION= .1226
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2186
 HT FLOW CONVERGENCE VALUE= .2610E-01 CRITERION= .1184 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 994
 *** TIME = .220903E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .8331E-05 OSCILLATION LIMIT = 65.73

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:54:10 JUN 19, 1995 CP= 54451.110
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 29.33 CRITERION= .1220
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1900
 HT FLOW CONVERGENCE VALUE= .2388E-01 CRITERION= .1183 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 995
 *** TIME = .221692E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6636E-05 OSCILLATION LIMIT = 52.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64 CRITERION= .1219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1898
 HT FLOW CONVERGENCE VALUE= .2375E-01 CRITERION= .1178 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 996
 *** TIME = .222481E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6588E-05 OSCILLATION LIMIT = 51.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.33 CRITERION= .1214
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1915
 HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .1176 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 997
 *** TIME = .223270E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6705E-05 OSCILLATION LIMIT = 52.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.64 CRITERION= .1213
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1899
 HT FLOW CONVERGENCE VALUE= .2365E-01 CRITERION= .1172 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 998
 *** TIME = .224059E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6593E-05 OSCILLATION LIMIT = 52.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.32 CRITERION= .1208
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1916
 HT FLOW CONVERGENCE VALUE= .2366E-01 CRITERION= .1170 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 999
 *** TIME = .224848E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6708E-05 OSCILLATION LIMIT = 52.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.63 CRITERION= .1207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1901
 HT FLOW CONVERGENCE VALUE= .2353E-01 CRITERION= .1166 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 1000
 *** TIME = .225637E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6600E-05 OSCILLATION LIMIT = 52.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.31 CRITERION= .1202
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1917
 HT FLOW CONVERGENCE VALUE= .2355E-01 CRITERION= .1164 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 1001
 *** TIME = .226426E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6711E-05 OSCILLATION LIMIT = 52.95

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.62 CRITERION= .1201
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1902
HT FLOW CONVERGENCE VALUE= .2343E-01 CRITERION= .1160 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 1002
*** TIME = .227215E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6606E-05 OSCILLATION LIMIT = 52.12
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .1197
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1918
HT FLOW CONVERGENCE VALUE= .2344E-01 CRITERION= .1158 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 1003
*** TIME = .228004E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6714E-05 OSCILLATION LIMIT = 52.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1195
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1904
HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1154 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 1004
*** TIME = .228793E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6612E-05 OSCILLATION LIMIT = 52.17
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.30 CRITERION= .1191
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1920
HT FLOW CONVERGENCE VALUE= .2333E-01 CRITERION= .1152 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 1005
*** TIME = .229582E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6718E-05 OSCILLATION LIMIT = 53.00
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.61 CRITERION= .1189
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1906
HT FLOW CONVERGENCE VALUE= .2321E-01 CRITERION= .1148 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 1006
*** TIME = .230370E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6619E-05 OSCILLATION LIMIT = 52.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.29 CRITERION= .1185
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1921
HT FLOW CONVERGENCE VALUE= .2321E-01 CRITERION= .1146 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 1007
*** TIME = .231159E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6721E-05 OSCILLATION LIMIT = 53.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.60 CRITERION= .1183
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1907
HT FLOW CONVERGENCE VALUE= .2309E-01 CRITERION= .1142 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 1008
*** TIME = .231948E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6625E-05 OSCILLATION LIMIT = 52.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.28 CRITERION= .1179
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1922
HT FLOW CONVERGENCE VALUE= .2307E-01 CRITERION= .1140 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 1009

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*** TIME = .232737E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6725E-05    OSCILLATION LIMIT = 53.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.59    CRITERION= .1177
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1909
    HT FLOW CONVERGENCE VALUE= .2296E-01    CRITERION= .1136    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 1010
*** TIME = .233526E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6631E-05    OSCILLATION LIMIT = 52.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.28    CRITERION= .1173
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1924
    HT FLOW CONVERGENCE VALUE= .2295E-01    CRITERION= .1134    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 1011
*** TIME = .234315E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6728E-05    OSCILLATION LIMIT = 53.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.58    CRITERION= .1171
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1911
    HT FLOW CONVERGENCE VALUE= .2285E-01    CRITERION= .1129    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 1012
*** TIME = .235104E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6637E-05    OSCILLATION LIMIT = 52.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.27    CRITERION= .1167
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1925
    HT FLOW CONVERGENCE VALUE= .2284E-01    CRITERION= .1127    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 1013
*** TIME = .235893E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6732E-05    OSCILLATION LIMIT = 53.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.58    CRITERION= .1165
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1913
    HT FLOW CONVERGENCE VALUE= .2274E-01    CRITERION= .1123    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 1014
*** TIME = .236682E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6643E-05    OSCILLATION LIMIT = 52.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.26    CRITERION= .1161
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1926
    HT FLOW CONVERGENCE VALUE= .2273E-01    CRITERION= .1121    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 1015
*** TIME = .237471E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6736E-05    OSCILLATION LIMIT = 53.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.57    CRITERION= .1159
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1915
    HT FLOW CONVERGENCE VALUE= .2264E-01    CRITERION= .1117    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 1016
*** TIME = .238260E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6650E-05    OSCILLATION LIMIT = 52.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.25    CRITERION= .1155
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1928
    HT FLOW CONVERGENCE VALUE= .2263E-01    CRITERION= .1115    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 1017
*** TIME = .239049E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6739E-05 OSCILLATION LIMIT = 53.17
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.56 CRITERION= .1153
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1916
HT FLOW CONVERGENCE VALUE= .2254E-01 CRITERION= .1111 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 1018
*** TIME = .239838E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6656E-05 OSCILLATION LIMIT = 52.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.25 CRITERION= .1149
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1929
HT FLOW CONVERGENCE VALUE= .2253E-01 CRITERION= .1109 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 1019
*** TIME = .240627E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6743E-05 OSCILLATION LIMIT = 53.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1147
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1918
HT FLOW CONVERGENCE VALUE= .2244E-01 CRITERION= .1105 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 1020
*** TIME = .241416E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6662E-05 OSCILLATION LIMIT = 52.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.24 CRITERION= .1143
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1931
HT FLOW CONVERGENCE VALUE= .2244E-01 CRITERION= .1103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 1021
*** TIME = .242205E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6747E-05 OSCILLATION LIMIT = 53.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.55 CRITERION= .1141
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1920
HT FLOW CONVERGENCE VALUE= .2235E-01 CRITERION= .1099 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 1022
*** TIME = .242994E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6668E-05 OSCILLATION LIMIT = 52.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.23 CRITERION= .1137
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1932
HT FLOW CONVERGENCE VALUE= .2233E-01 CRITERION= .1097 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 1023
*** TIME = .243782E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6751E-05 OSCILLATION LIMIT = 53.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.54 CRITERION= .1136
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1922
HT FLOW CONVERGENCE VALUE= .2226E-01 CRITERION= .1093 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 1024
*** TIME = .244571E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6674E-05 OSCILLATION LIMIT = 52.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.22 CRITERION= .1131

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1933
 HT FLOW CONVERGENCE VALUE= .2225E-01 CRITERION= .1091 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 1025
 *** TIME = .245360E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6755E-05 OSCILLATION LIMIT = 53.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.53 CRITERION= .1130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1923
 HT FLOW CONVERGENCE VALUE= .2217E-01 CRITERION= .1087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 1026
 *** TIME = .246149E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6680E-05 OSCILLATION LIMIT = 52.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.22 CRITERION= .1125
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1934
 HT FLOW CONVERGENCE VALUE= .2216E-01 CRITERION= .1085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 1027
 *** TIME = .246938E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6758E-05 OSCILLATION LIMIT = 53.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1925
 HT FLOW CONVERGENCE VALUE= .2209E-01 CRITERION= .1080 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 1028
 *** TIME = .247727E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6686E-05 OSCILLATION LIMIT = 52.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.21 CRITERION= .1119
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1936
 HT FLOW CONVERGENCE VALUE= .2207E-01 CRITERION= .1078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 1029
 *** TIME = .248516E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6762E-05 OSCILLATION LIMIT = 53.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.52 CRITERION= .1118
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1926
 HT FLOW CONVERGENCE VALUE= .2199E-01 CRITERION= .1074 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 1030
 *** TIME = .249305E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6692E-05 OSCILLATION LIMIT = 52.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.20 CRITERION= .1113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1937
 HT FLOW CONVERGENCE VALUE= .2197E-01 CRITERION= .1072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 1031
 *** TIME = .250094E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6766E-05 OSCILLATION LIMIT = 53.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.51 CRITERION= .1112
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1928
 HT FLOW CONVERGENCE VALUE= .2191E-01 CRITERION= .1068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 1032
 *** TIME = .250883E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6698E-05 OSCILLATION LIMIT = 52.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.19 CRITERION= .1107
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1938
 HT FLOW CONVERGENCE VALUE= .2188E-01 CRITERION= .1066 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 1033
 *** TIME = .251672E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6770E-05 OSCILLATION LIMIT = 53.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.50 CRITERION= .1106
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1929
 HT FLOW CONVERGENCE VALUE= .2181E-01 CRITERION= .1062 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 1034
 *** TIME = .252461E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6704E-05 OSCILLATION LIMIT = 52.89

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 07:31:46 JUN 19, 1995 CP= 56653.950
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10. yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1085
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1475
 HT FLOW CONVERGENCE VALUE= .1660E-01 CRITERION= .1061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 1035
 *** TIME = .253250E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6893E-05 OSCILLATION LIMIT = 54.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.37 CRITERION= .1084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1485
 HT FLOW CONVERGENCE VALUE= .1662E-01 CRITERION= .1057 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 1036
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6924E-05 OSCILLATION LIMIT = 54.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1080
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1666E-01 CRITERION= .1056 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 1037
 *** TIME = .254828E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7076E-05 OSCILLATION LIMIT = 55.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.37 CRITERION= .1079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1485
 HT FLOW CONVERGENCE VALUE= .1657E-01 CRITERION= .1052 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 1038
 *** TIME = .255617E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6925E-05 OSCILLATION LIMIT = 54.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.06 CRITERION= .1075
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1661E-01 CRITERION= .1051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 1039
 *** TIME = .256406E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .7078E-05 OSCILLATION LIMIT = 55.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.37 CRITERION= .1074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1486
 HT FLOW CONVERGENCE VALUE= .1650E-01 CRITERION= .1048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 1040
 *** TIME = .257194E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6931E-05 OSCILLATION LIMIT = 54.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.05 CRITERION= .1071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1503
 HT FLOW CONVERGENCE VALUE= .1654E-01 CRITERION= .1046 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 1041
 *** TIME = .257983E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7079E-05 OSCILLATION LIMIT = 55.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.36 CRITERION= .1070
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1487
 HT FLOW CONVERGENCE VALUE= .1645E-01 CRITERION= .1043 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 1042
 *** TIME = .258772E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6937E-05 OSCILLATION LIMIT = 54.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.05 CRITERION= .1066
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
 HT FLOW CONVERGENCE VALUE= .1648E-01 CRITERION= .1042 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 9 COMPLETED. CUM ITER = 1043
 *** TIME = .259561E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7081E-05 OSCILLATION LIMIT = 55.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.36 CRITERION= .1065
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1488
 HT FLOW CONVERGENCE VALUE= .1640E-01 CRITERION= .1038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 10 COMPLETED. CUM ITER = 1044
 *** TIME = .260350E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6942E-05 OSCILLATION LIMIT = 54.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.04 CRITERION= .1061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
 HT FLOW CONVERGENCE VALUE= .1643E-01 CRITERION= .1037 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 11 COMPLETED. CUM ITER = 1045
 *** TIME = .261139E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7083E-05 OSCILLATION LIMIT = 55.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.35 CRITERION= .1060
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1489
 HT FLOW CONVERGENCE VALUE= .1633E-01 CRITERION= .1033 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 12 COMPLETED. CUM ITER = 1046
 *** TIME = .261928E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6948E-05 OSCILLATION LIMIT = 54.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.04 CRITERION= .1057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1505
 HT FLOW CONVERGENCE VALUE= .1636E-01 CRITERION= .1032 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 13 COMPLETED. CUM ITER = 1047
 *** TIME = .262717E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7085E-05 OSCILLATION LIMIT = 55.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.35 CRITERION= .1056
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1490
 HT FLOW CONVERGENCE VALUE= .1628E-01 CRITERION= .1028 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 14 COMPLETED. CUM ITER = 1048
 *** TIME = .263506E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6954E-05 OSCILLATION LIMIT = 54.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1505
 HT FLOW CONVERGENCE VALUE= .1630E-01 CRITERION= .1027 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 15 COMPLETED. CUM ITER = 1049
 *** TIME = .264295E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7087E-05 OSCILLATION LIMIT = 55.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1491
 HT FLOW CONVERGENCE VALUE= .1622E-01 CRITERION= .1024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 16 COMPLETED. CUM ITER = 1050
 *** TIME = .265084E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6960E-05 OSCILLATION LIMIT = 54.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1047
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1506
 HT FLOW CONVERGENCE VALUE= .1624E-01 CRITERION= .1022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 17 COMPLETED. CUM ITER = 1051
 *** TIME = .265873E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7089E-05 OSCILLATION LIMIT = 55.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1492
 HT FLOW CONVERGENCE VALUE= .1615E-01 CRITERION= .1019 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 18 COMPLETED. CUM ITER = 1052
 *** TIME = .266662E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6966E-05 OSCILLATION LIMIT = 54.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1507
 HT FLOW CONVERGENCE VALUE= .1617E-01 CRITERION= .1018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 19 COMPLETED. CUM ITER = 1053
 *** TIME = .267451E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7091E-05 OSCILLATION LIMIT = 55.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.34 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1493
 HT FLOW CONVERGENCE VALUE= .1610E-01 CRITERION= .1014 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 20 COMPLETED. CUM ITER = 1054
 *** TIME = .268240E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6971E-05 OSCILLATION LIMIT = 55.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.02 CRITERION= .1038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1507

HT FLOW CONVERGENCE VALUE= .1612E-01 CRITERION= .1013 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 21 COMPLETED. CUM ITER = 1055
 *** TIME = .269029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7094E-05 OSCILLATION LIMIT = 55.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.33 CRITERION= .1037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1494
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .1009 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 22 COMPLETED. CUM ITER = 1056
 *** TIME = .269817E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6977E-05 OSCILLATION LIMIT = 55.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.02 CRITERION= .1033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1508
 HT FLOW CONVERGENCE VALUE= .1605E-01 CRITERION= .1008 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 23 COMPLETED. CUM ITER = 1057
 *** TIME = .270606E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7096E-05 OSCILLATION LIMIT = 55.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.33 CRITERION= .1032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1495
 HT FLOW CONVERGENCE VALUE= .1599E-01 CRITERION= .1004 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 24 COMPLETED. CUM ITER = 1058
 *** TIME = .271395E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6983E-05 OSCILLATION LIMIT = 55.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.01 CRITERION= .1028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1508
 HT FLOW CONVERGENCE VALUE= .1600E-01 CRITERION= .1003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 25 COMPLETED. CUM ITER = 1059
 *** TIME = .272184E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7098E-05 OSCILLATION LIMIT = 56.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .1027
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1496
 HT FLOW CONVERGENCE VALUE= .1592E-01 CRITERION= .9997E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 26 COMPLETED. CUM ITER = 1060
 *** TIME = .272973E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6988E-05 OSCILLATION LIMIT = 55.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.01 CRITERION= .1024
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1509
 HT FLOW CONVERGENCE VALUE= .1593E-01 CRITERION= .9984E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 27 COMPLETED. CUM ITER = 1061
 *** TIME = .273762E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7101E-05 OSCILLATION LIMIT = 56.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.32 CRITERION= .1023
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1498
 HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .9949E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 28 COMPLETED. CUM ITER = 1062
 *** TIME = .274551E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6994E-05 OSCILLATION LIMIT = 55.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1019
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1510
 HT FLOW CONVERGENCE VALUE= .1587E-01 CRITERION= .9936E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 29 COMPLETED. CUM ITER = 1063
 *** TIME = .275340E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7103E-05 OSCILLATION LIMIT = 56.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1499
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .9901E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 30 COMPLETED. CUM ITER = 1064
 *** TIME = .276129E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6999E-05 OSCILLATION LIMIT = 55.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1014
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1510
 HT FLOW CONVERGENCE VALUE= .1580E-01 CRITERION= .9888E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 31 COMPLETED. CUM ITER = 1065
 *** TIME = .276918E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7105E-05 OSCILLATION LIMIT = 56.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1013
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1500
 HT FLOW CONVERGENCE VALUE= .1573E-01 CRITERION= .9853E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 32 COMPLETED. CUM ITER = 1066
 *** TIME = .277707E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7004E-05 OSCILLATION LIMIT = 55.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.00 CRITERION= .1010
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1511
 HT FLOW CONVERGENCE VALUE= .1574E-01 CRITERION= .9840E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 33 COMPLETED. CUM ITER = 1067
 *** TIME = .278496E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7108E-05 OSCILLATION LIMIT = 56.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.31 CRITERION= .1009
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1501
 HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .9805E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 34 COMPLETED. CUM ITER = 1068
 *** TIME = .279285E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7010E-05 OSCILLATION LIMIT = 55.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.99 CRITERION= .1005
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1512
 HT FLOW CONVERGENCE VALUE= .1567E-01 CRITERION= .9792E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 35 COMPLETED. CUM ITER = 1069
 *** TIME = .280074E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7110E-05 OSCILLATION LIMIT = 56.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.30 CRITERION= .1004
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1502
 HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .9757E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 36 COMPLETED. CUM ITER = 1070
 *** TIME = .280863E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7015E-05 OSCILLATION LIMIT = 55.34

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.99 CRITERION= .1000
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1512
HT FLOW CONVERGENCE VALUE= .1560E-01 CRITERION= .9744E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 37 COMPLETED. CUM ITER = 1071
*** TIME = .281652E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7113E-05 OSCILLATION LIMIT = 56.12
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.30 CRITERION= .9993E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1503
HT FLOW CONVERGENCE VALUE= .1554E-01 CRITERION= .9709E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 38 COMPLETED. CUM ITER = 1072
*** TIME = .282441E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7020E-05 OSCILLATION LIMIT = 55.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.98 CRITERION= .9955E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1513
HT FLOW CONVERGENCE VALUE= .1553E-01 CRITERION= .9696E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 39 COMPLETED. CUM ITER = 1073
*** TIME = .283229E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7115E-05 OSCILLATION LIMIT = 56.14
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.29 CRITERION= .9946E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1504
HT FLOW CONVERGENCE VALUE= .1547E-01 CRITERION= .9661E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 40 COMPLETED. CUM ITER = 1074
*** TIME = .284018E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7025E-05 OSCILLATION LIMIT = 55.42
Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM FROM .31558E+10 TO .31558E+11 BY .31558E+10
TIME= .31558E+10

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 98.414 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10

LOAD LABELS = TEMP
VALUES = 98.761 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 99.587 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 58890.100 TIME= 08:11:02
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 08:11:02 JUN 19, 1995 CP= 58890.100
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 31
TIME AT END OF THE LOAD STEP.31558E+10
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 18.63 CRITERION= .9839E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1321
HT FLOW CONVERGENCE VALUE= .1336E-01 CRITERION= .9650E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 1 COMPLETED. CUM ITER = 1075
*** TIME = .284807E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7510E-05 OSCILLATION LIMIT = 59.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.94 CRITERION= .9832E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1319
HT FLOW CONVERGENCE VALUE= .1333E-01 CRITERION= .9618E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 2 COMPLETED. CUM ITER = 1076
*** TIME = .285596E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7460E-05 OSCILLATION LIMIT = 58.85
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9797E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
HT FLOW CONVERGENCE VALUE= .1335E-01 CRITERION= .9607E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 31 SUBSTEP 3 COMPLETED. CUM ITER = 1077
*** TIME = .286385E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7594E-05 OSCILLATION LIMIT = 59.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9790E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1320
HT FLOW CONVERGENCE VALUE= .1328E-01 CRITERION= .9575E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 4 COMPLETED. CUM ITER = 1078
*** TIME = .287174E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7463E-05 OSCILLATION LIMIT = 58.88
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9755E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
HT FLOW CONVERGENCE VALUE= .1330E-01 CRITERION= .9564E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 1079
*** TIME = .287963E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7596E-05 OSCILLATION LIMIT = 59.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9747E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1320
HT FLOW CONVERGENCE VALUE= .1323E-01 CRITERION= .9532E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 1080
*** TIME = .288752E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7468E-05 OSCILLATION LIMIT = 58.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.62 CRITERION= .9713E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
HT FLOW CONVERGENCE VALUE= .1325E-01 CRITERION= .9521E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 1081
*** TIME = .289541E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7598E-05 OSCILLATION LIMIT = 59.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.93 CRITERION= .9705E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1321
HT FLOW CONVERGENCE VALUE= .1318E-01 CRITERION= .9489E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 8 COMPLETED. CUM ITER = 1082
*** TIME = .290330E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7473E-05 OSCILLATION LIMIT = 58.96
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9670E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
HT FLOW CONVERGENCE VALUE= .1319E-01 CRITERION= .9478E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 9 COMPLETED. CUM ITER = 1083
*** TIME = .291119E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7599E-05 OSCILLATION LIMIT = 59.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9663E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1322
HT FLOW CONVERGENCE VALUE= .1313E-01 CRITERION= .9446E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 10 COMPLETED. CUM ITER = 1084
*** TIME = .291908E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7478E-05 OSCILLATION LIMIT = 59.00
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9628E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334

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HT FLOW CONVERGENCE VALUE= .1320E-01 CRITERION= .9435E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 11 COMPLETED. CUM ITER = 1085
 *** TIME = .292697E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7601E-05 OSCILLATION LIMIT = 59.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9621E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1323
 HT FLOW CONVERGENCE VALUE= .1320E-01 CRITERION= .9403E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 12 COMPLETED. CUM ITER = 1086
 *** TIME = .293486E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7484E-05 OSCILLATION LIMIT = 59.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9586E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334
 HT FLOW CONVERGENCE VALUE= .1324E-01 CRITERION= .9392E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 13 COMPLETED. CUM ITER = 1087
 *** TIME = .294275E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7602E-05 OSCILLATION LIMIT = 59.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9578E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1324
 HT FLOW CONVERGENCE VALUE= .1332E-01 CRITERION= .9360E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 14 COMPLETED. CUM ITER = 1088
 *** TIME = .295064E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7489E-05 OSCILLATION LIMIT = 59.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.61 CRITERION= .9544E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
 HT FLOW CONVERGENCE VALUE= .1340E-01 CRITERION= .9349E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 15 COMPLETED. CUM ITER = 1089
 *** TIME = .295853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7604E-05 OSCILLATION LIMIT = 59.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9536E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1325
 HT FLOW CONVERGENCE VALUE= .1351E-01 CRITERION= .9317E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 16 COMPLETED. CUM ITER = 1090
 *** TIME = .296641E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7496E-05 OSCILLATION LIMIT = 59.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9502E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
 HT FLOW CONVERGENCE VALUE= .1360E-01 CRITERION= .9306E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 17 COMPLETED. CUM ITER = 1091
 *** TIME = .297430E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7606E-05 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.92 CRITERION= .9494E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1326
 HT FLOW CONVERGENCE VALUE= .1356E-01 CRITERION= .9274E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 18 COMPLETED. CUM ITER = 1092
 *** TIME = .298219E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7502E-05 OSCILLATION LIMIT = 59.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9460E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1336
 HT FLOW CONVERGENCE VALUE= .1356E-01 CRITERION= .9263E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 19 COMPLETED. CUM ITER = 1093
 *** TIME = .299008E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7609E-05 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9452E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1326
 HT FLOW CONVERGENCE VALUE= .1361E-01 CRITERION= .9231E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 20 COMPLETED. CUM ITER = 1094
 *** TIME = .299797E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7507E-05 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9417E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1336
 HT FLOW CONVERGENCE VALUE= .1367E-01 CRITERION= .9220E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 21 COMPLETED. CUM ITER = 1095
 *** TIME = .300586E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7611E-05 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9410E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1327
 HT FLOW CONVERGENCE VALUE= .1375E-01 CRITERION= .9188E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 22 COMPLETED. CUM ITER = 1096
 *** TIME = .301375E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7513E-05 OSCILLATION LIMIT = 59.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9375E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1337
 HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .9178E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 23 COMPLETED. CUM ITER = 1097
 *** TIME = .302164E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7613E-05 OSCILLATION LIMIT = 60.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9368E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1328
 HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .9145E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 24 COMPLETED. CUM ITER = 1098
 *** TIME = .302953E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7519E-05 OSCILLATION LIMIT = 59.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9333E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1338
 HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .9135E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 25 COMPLETED. CUM ITER = 1099
 *** TIME = .303742E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7616E-05 OSCILLATION LIMIT = 60.09
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9326E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1329
 HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .9102E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 26 COMPLETED. CUM ITER = 1100
 *** TIME = .304531E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7525E-05 OSCILLATION LIMIT = 59.37

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9291E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1338
 HT FLOW CONVERGENCE VALUE= .1420E-01 CRITERION= .9092E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 27 COMPLETED. CUM ITER = 1101
 *** TIME = .305320E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7619E-05 OSCILLATION LIMIT = 60.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9284E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1330
 HT FLOW CONVERGENCE VALUE= .1416E-01 CRITERION= .9059E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 28 COMPLETED. CUM ITER = 1102
 *** TIME = .306109E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7530E-05 OSCILLATION LIMIT = 59.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9249E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1339
 HT FLOW CONVERGENCE VALUE= .1412E-01 CRITERION= .9049E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 29 COMPLETED. CUM ITER = 1103
 *** TIME = .306898E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7621E-05 OSCILLATION LIMIT = 60.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9241E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1331
 HT FLOW CONVERGENCE VALUE= .1409E-01 CRITERION= .9016E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 30 COMPLETED. CUM ITER = 1104
 *** TIME = .307687E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7535E-05 OSCILLATION LIMIT = 59.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9207E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1339
 HT FLOW CONVERGENCE VALUE= .1404E-01 CRITERION= .9005E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 31 COMPLETED. CUM ITER = 1105
 *** TIME = .308476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7624E-05 OSCILLATION LIMIT = 60.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9199E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
 HT FLOW CONVERGENCE VALUE= .1398E-01 CRITERION= .8973E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 32 COMPLETED. CUM ITER = 1106
 *** TIME = .309264E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7541E-05 OSCILLATION LIMIT = 59.49
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60 CRITERION= .9165E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1340
 HT FLOW CONVERGENCE VALUE= .1405E-01 CRITERION= .8962E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 33 COMPLETED. CUM ITER = 1107
 *** TIME = .310053E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7627E-05 OSCILLATION LIMIT = 60.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.91 CRITERION= .9157E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1332
 HT FLOW CONVERGENCE VALUE= .1402E-01 CRITERION= .8930E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 34 COMPLETED. CUM ITER = 1108

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*** TIME = .310842E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7546E-05    OSCILLATION LIMIT = 59.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9122E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1340
HT FLOW CONVERGENCE VALUE= .1395E-01    CRITERION= .8919E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 35 COMPLETED. CUM ITER = 1109
*** TIME = .311631E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7629E-05    OSCILLATION LIMIT = 60.19
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9115E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1333
HT FLOW CONVERGENCE VALUE= .1399E-01    CRITERION= .8887E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 36 COMPLETED. CUM ITER = 1110
*** TIME = .312420E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7551E-05    OSCILLATION LIMIT = 59.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9080E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1341
HT FLOW CONVERGENCE VALUE= .1398E-01    CRITERION= .8876E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 37 COMPLETED. CUM ITER = 1111
*** TIME = .313209E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7632E-05    OSCILLATION LIMIT = 60.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9073E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1334
HT FLOW CONVERGENCE VALUE= .1395E-01    CRITERION= .8844E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 38 COMPLETED. CUM ITER = 1112
*** TIME = .313998E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7556E-05    OSCILLATION LIMIT = 59.61
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.60    CRITERION= .9038E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1342
HT FLOW CONVERGENCE VALUE= .1425E-01    CRITERION= .8833E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 39 COMPLETED. CUM ITER = 1113
*** TIME = .314787E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7635E-05    OSCILLATION LIMIT = 60.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 18.91    CRITERION= .9031E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1335
HT FLOW CONVERGENCE VALUE= .1439E-01    CRITERION= .8801E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 40 COMPLETED. CUM ITER = 1114
*** TIME = .315576E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7562E-05    OSCILLATION LIMIT = 59.66

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*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX 08:54:31 JUN 19, 1995 CP= 61135.450
FOR SUPPORT CALL ROBERT BAHNEY  PHONE (702) 794-5337  FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 100.2 CRITERION= .1334

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6512
 HT FLOW CONVERGENCE VALUE= .7106E-01 CRITERION= .8719E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 1115
 *** TIME = .323465E+10 TIME INC = .788940E+08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 100.5 CRITERION= .1330
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6241
 HT FLOW CONVERGENCE VALUE= .6723E-01 CRITERION= .8615E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 1116
 *** TIME = .331355E+10 TIME INC = .788940E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 300.9 CRITERION= .3130
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.943
 HT FLOW CONVERGENCE VALUE= .1875 CRITERION= .8348E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9380E-01
 HT FLOW CONVERGENCE VALUE= .3797E-02 CRITERION= .8348E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 1118
 *** TIME = .355023E+10 TIME INC = .236682E+09
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 301.2 CRITERION= .3124
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.979
 HT FLOW CONVERGENCE VALUE= .1848 CRITERION= .8059E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9204E-01
 HT FLOW CONVERGENCE VALUE= .3577E-02 CRITERION= .8059E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 1120
 *** TIME = .378691E+10 TIME INC = .236682E+09
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 802.7 CRITERION= .8068
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.287
 HT FLOW CONVERGENCE VALUE= .4427 CRITERION= .7325E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2233
 HT FLOW CONVERGENCE VALUE= .7744E-02 CRITERION= .7325E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 1122
 *** TIME = .441806E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 803.1 CRITERION= .8063
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.318
 HT FLOW CONVERGENCE VALUE= .3877 CRITERION= .6568E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2048
 HT FLOW CONVERGENCE VALUE= .6415E-02 CRITERION= .6568E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 1124
 *** TIME = .504922E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 802.9 CRITERION= .8057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.350
 HT FLOW CONVERGENCE VALUE= .3349 CRITERION= .5829E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1856
 HT FLOW CONVERGENCE VALUE= .5169E-02 CRITERION= .5829E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 1126
 *** TIME = .568037E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 803.4 CRITERION= .8054
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.378
 HT FLOW CONVERGENCE VALUE= .2942 CRITERION= .5067E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1634
 HT FLOW CONVERGENCE VALUE= .3815E-02 CRITERION= .5066E-01 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 1128
*** TIME = .631152E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:08:27 JUN 19, 1995 CP= 61835.610
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 336.0 CRITERION= .3399
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.969
HT FLOW CONVERGENCE VALUE= .1181 CRITERION= .4830E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6042E-01
HT FLOW CONVERGENCE VALUE= .1390E-02 CRITERION= .4830E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 1130
*** TIME = .694267E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.3 CRITERION= .3397
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.969
HT FLOW CONVERGENCE VALUE= .1104 CRITERION= .4572E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5728E-01
HT FLOW CONVERGENCE VALUE= .1208E-02 CRITERION= .4572E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 1132
*** TIME = .757382E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.0 CRITERION= .3392
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.975
HT FLOW CONVERGENCE VALUE= .1044 CRITERION= .4335E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5387E-01
HT FLOW CONVERGENCE VALUE= .1060E-02 CRITERION= .4335E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 1134
*** TIME = .820498E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.4 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.977
HT FLOW CONVERGENCE VALUE= .1005 CRITERION= .4077E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5027E-01
HT FLOW CONVERGENCE VALUE= .9224E-03 CRITERION= .4077E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 1136
*** TIME = .883613E+10 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 336.1 CRITERION= .3386
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.983
HT FLOW CONVERGENCE VALUE= .9557E-01 CRITERION= .3839E-01
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4649E-01
HT FLOW CONVERGENCE VALUE= .7849E-03 CRITERION= .3839E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 1138
*** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:16:12 JUN 19, 1995 CP= 62254.270
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 193.3 CRITERION= .1970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.122
 HT FLOW CONVERGENCE VALUE= .5313E-01 CRITERION= .3690E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2494E-01
 HT FLOW CONVERGENCE VALUE= .4237E-03 CRITERION= .3690E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 1140
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.0 CRITERION= .1966
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.125
 HT FLOW CONVERGENCE VALUE= .5142E-01 CRITERION= .3561E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2388E-01
 HT FLOW CONVERGENCE VALUE= .3949E-03 CRITERION= .3562E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 1142
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.4 CRITERION= .1965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.124
 HT FLOW CONVERGENCE VALUE= .4940E-01 CRITERION= .3412E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2283E-01
 HT FLOW CONVERGENCE VALUE= .3645E-03 CRITERION= .3412E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 1144
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.1 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.128
 HT FLOW CONVERGENCE VALUE= .4748E-01 CRITERION= .3284E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183E-01
 HT FLOW CONVERGENCE VALUE= .3368E-03 CRITERION= .3284E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 1146
 *** TIME = .119919E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 193.4 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.127
 HT FLOW CONVERGENCE VALUE= .4549E-01 CRITERION= .3134E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2074E-01
 HT FLOW CONVERGENCE VALUE= .3101E-03 CRITERION= .3134E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 1148
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:23:19 JUN 19, 1995 CP= 62664.040
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7746
 HT FLOW CONVERGENCE VALUE= .3171E-01 CRITERION= .3055E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1410E-01
 HT FLOW CONVERGENCE VALUE= .2128E-03 CRITERION= .3055E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 1150
 *** TIME = .132542E+11 TIME INC = .631152E+09

*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.6 CRITERION= .1457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7725
 HT FLOW CONVERGENCE VALUE= .3077E-01 CRITERION= .2956E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1366E-01
 HT FLOW CONVERGENCE VALUE= .2011E-03 CRITERION= .2956E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 1152
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7756
 HT FLOW CONVERGENCE VALUE= .2990E-01 CRITERION= .2877E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1331E-01
 HT FLOW CONVERGENCE VALUE= .1898E-03 CRITERION= .2877E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 1154
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.6 CRITERION= .1454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7736
 HT FLOW CONVERGENCE VALUE= .2894E-01 CRITERION= .2777E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1290E-01
 HT FLOW CONVERGENCE VALUE= .1784E-03 CRITERION= .2777E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 1156
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 142.3 CRITERION= .1450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7767
 HT FLOW CONVERGENCE VALUE= .2806E-01 CRITERION= .2698E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1255E-01
 HT FLOW CONVERGENCE VALUE= .1677E-03 CRITERION= .2698E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 1158
 *** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:30:53 JUN 19, 1995 CP= 63075.020
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 138.1 CRITERION= .1407
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6733
 HT FLOW CONVERGENCE VALUE= .2523E-01 CRITERION= .2618E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 1159
 *** TIME = .164100E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 137.8 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6653
 HT FLOW CONVERGENCE VALUE= .2450E-01 CRITERION= .2559E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 1160
 *** TIME = .170411E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.2 CRITERION= .1404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6635
 HT FLOW CONVERGENCE VALUE= .2381E-01 CRITERION= .2479E-01 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 1161
*** TIME = .176723E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 137.8 CRITERION= .1401
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6667
HT FLOW CONVERGENCE VALUE= .2319E-01 CRITERION= .2420E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 1162
*** TIME = .183034E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 138.2 CRITERION= .1402
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6648
HT FLOW CONVERGENCE VALUE= .2250E-01 CRITERION= .2340E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 1163
*** TIME = .189346E+11 TIME INC = .631152E+09
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:35:40 JUN 19, 1995 CP= 63355.420
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1190
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5351
HT FLOW CONVERGENCE VALUE= .1827E-01 CRITERION= .2298E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 1164
*** TIME = .195657E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 116.9 CRITERION= .1191
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5347
HT FLOW CONVERGENCE VALUE= .1784E-01 CRITERION= .2235E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1165
*** TIME = .201969E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1188
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5377
HT FLOW CONVERGENCE VALUE= .1746E-01 CRITERION= .2193E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1166
*** TIME = .208280E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 117.0 CRITERION= .1189
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5355
HT FLOW CONVERGENCE VALUE= .1702E-01 CRITERION= .2130E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1167
*** TIME = .214592E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 116.6 CRITERION= .1186
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5385
HT FLOW CONVERGENCE VALUE= .1665E-01 CRITERION= .2088E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1168
*** TIME = .220903E+11 TIME INC = .631152E+09
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***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:41:03 JUN 19, 1995 CP= 63639.520
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1045
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4615
 HT FLOW CONVERGENCE VALUE= .1417E-01 CRITERION= .2033E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1169
 *** TIME = .227215E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.1 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4654
 HT FLOW CONVERGENCE VALUE= .1391E-01 CRITERION= .1999E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1170
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1043
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4631
 HT FLOW CONVERGENCE VALUE= .1357E-01 CRITERION= .1945E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1171
 *** TIME = .239838E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.1 CRITERION= .1040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4660
 HT FLOW CONVERGENCE VALUE= .1330E-01 CRITERION= .1910E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1172
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 102.4 CRITERION= .1041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4637
 HT FLOW CONVERGENCE VALUE= .1296E-01 CRITERION= .1856E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1173
 *** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:46:04 JUN 19, 1995 CP= 63919.180
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 88.90 CRITERION= .9089E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3907
 HT FLOW CONVERGENCE VALUE= .1094E-01 CRITERION= .1830E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1174
 *** TIME = .258772E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 89.22 CRITERION= .9100E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3891
 HT FLOW CONVERGENCE VALUE= .1071E-01 CRITERION= .1785E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1175
*** TIME = .265084E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.91 CRITERION= .9075E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3919
HT FLOW CONVERGENCE VALUE= .1053E-01 CRITERION= .1760E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1176
*** TIME = .271395E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 89.22 CRITERION= .9086E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3895
HT FLOW CONVERGENCE VALUE= .1029E-01 CRITERION= .1714E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1177
*** TIME = .277707E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 88.91 CRITERION= .9062E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3924
HT FLOW CONVERGENCE VALUE= .1011E-01 CRITERION= .1689E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1178
*** TIME = .284018E+11 TIME INC = .631152E+09

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:51:15 JUN 19, 1995 CP= 64200.730
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 76.37 CRITERION= .7814E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3265
HT FLOW CONVERGENCE VALUE= .8424E-02 CRITERION= .1649E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1179
*** TIME = .290330E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.06 CRITERION= .7790E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3300
HT FLOW CONVERGENCE VALUE= .8307E-02 CRITERION= .1631E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1180
*** TIME = .296641E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.37 CRITERION= .7802E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3275
HT FLOW CONVERGENCE VALUE= .8137E-02 CRITERION= .1591E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1181
*** TIME = .302953E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.06 CRITERION= .7778E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3303
HT FLOW CONVERGENCE VALUE= .8014E-02 CRITERION= .1573E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1182
*** TIME = .309264E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 76.38 CRITERION= .7790E-01

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3278
HT FLOW CONVERGENCE VALUE= .7845E-02 CRITERION= .1533E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1183
*** TIME = .315576E+11 TIME INC = .631152E+09

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 64479.040

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44j.db
FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:56:12 JUN 19, 1995 CP= 64484.630
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
2 NSOL 1136 TEMP peakclad 78.27 .3156E+11 237.7 .6312E+08

*GET TMTMAX FROM VARI 2 ITEM=EXTR TMAX VALUE= 63115231.6

***** ROUTINE COMPLETED ***** CP = 64484.950

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:56:14 JUN 19, 1995 CP= 64484.980
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****

Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .63115E+08

SET COMMAND GOT LOAD STEP= 14 SUBSTEP= 40 CUMULATIVE ITERATION= 434
TIME/FREQUENCY= .63115E+08

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (2.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at Time of Peak Temp. (2.000001 years)

*** WARNING *** CP= 64511.650 TIME= 09:56:47
The selected element set contains mixed materials.
This could invalidate error estimation.
Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 754
TIME/FREQUENCY= .31558E+09

TITLE=
44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 10 years

*** WARNING *** CP= 64548.420 TIME= 09:57:26
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 914
TIME/FREQUENCY= .15779E+10

TITLE=

44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 64585.230 TIME= 09:58:18
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 40 CUMULATIVE ITERATION= 1114
TIME/FREQUENCY= .31558E+10

TITLE=
44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 121.56 BY 1.0513 TO 255.07

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 64620.930 TIME= 09:58:55
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP = 64629.180

Set some needed variable values:

PARAMETER DATM = .9000000E-01
PARAMETER DAT1 = .2500000
PARAMETER DAT2 = .4100000
PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
Save profile from center to edge

Variable Legend: A01i000

c = center of assembly
h = halfway between center and tube
s = inside structural stainless tube layer
t = stainless tube cladding
g = tube guide
i = inner barrier of DC
o = outer barrier of DC
= ID number of assembly (01 is center)
i = side of assembly toward center of WP
o = side of assembly toward edge of WP
000 = profile center down
045 = profile 45 deg down
090 = profile center side
135 = profile 45 deg up
180 = profile center up

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 09:59:03 JUN 19, 1995 CP= 64629.190
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2	IS AT NODE 3544	ITEM= TEMP COMP=	NAME= ts1i000
VARIABLE 3	IS AT NODE 1094	ITEM= TEMP COMP=	NAME= t01i000
VARIABLE 4	IS AT NODE 1101	ITEM= TEMP COMP=	NAME= s01i000
VARIABLE 5	IS AT NODE 1138	ITEM= TEMP COMP=	NAME= h01i000
VARIABLE 6	IS AT NODE 1136	ITEM= TEMP COMP=	NAME= c01i000
VARIABLE 7	IS AT NODE 1134	ITEM= TEMP COMP=	NAME= h01o000
VARIABLE 8	IS AT NODE 1055	ITEM= TEMP COMP=	NAME= s01o000
VARIABLE 9	IS AT NODE 1047	ITEM= TEMP COMP=	NAME= t01o000
VARIABLE 10	IS AT NODE 1246	ITEM= TEMP COMP=	NAME= s09i000
VARIABLE 11	IS AT NODE 1283	ITEM= TEMP COMP=	NAME= h09i000
VARIABLE 12	IS AT NODE 1281	ITEM= TEMP COMP=	NAME= c09i000
VARIABLE 13	IS AT NODE 1279	ITEM= TEMP COMP=	NAME= h09o000
VARIABLE 14	IS AT NODE 1200	ITEM= TEMP COMP=	NAME= s09o000
VARIABLE 15	IS AT NODE 1192	ITEM= TEMP COMP=	NAME= t09o000
VARIABLE 16	IS AT NODE 1391	ITEM= TEMP COMP=	NAME= s15i000
VARIABLE 17	IS AT NODE 1428	ITEM= TEMP COMP=	NAME= h15i000

VARIABLE 18 IS AT NODE 1426 ITEM= TEMP COMP= NAME= c15i000
 VARIABLE 19 IS AT NODE 1424 ITEM= TEMP COMP= NAME= h15o000
 VARIABLE 20 IS AT NODE 1345 ITEM= TEMP COMP= NAME= s15o000
 VARIABLE 21 IS AT NODE 1337 ITEM= TEMP COMP= NAME= t15o000
 VARIABLE 22 IS AT NODE 1536 ITEM= TEMP COMP= NAME= s21i000
 VARIABLE 23 IS AT NODE 1573 ITEM= TEMP COMP= NAME= h21i000
 VARIABLE 24 IS AT NODE 1571 ITEM= TEMP COMP= NAME= c21i000
 VARIABLE 25 IS AT NODE 1569 ITEM= TEMP COMP= NAME= h21o000
 VARIABLE 26 IS AT NODE 1490 ITEM= TEMP COMP= NAME= s21o000
 VARIABLE 27 IS AT NODE 1482 ITEM= TEMP COMP= NAME= t21o000
 VARIABLE 28 IS AT NODE 4217 ITEM= TEMP COMP= NAME= i21i000
 VARIABLE 29 IS AT NODE 4207 ITEM= TEMP COMP= NAME= i21o000
 VARIABLE 30 IS AT NODE 4437 ITEM= TEMP COMP= NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3544 TEMP	ts1i000	76.86	.3156E+11	215.8	.9467E+08
3	NSOL	1094 TEMP	t01i000	76.86	.3156E+11	215.9	.9467E+08
4	NSOL	1101 TEMP	s01i000	76.87	.3156E+11	215.9	.9467E+08
5	NSOL	1138 TEMP	h01i000	77.79	.3156E+11	230.2	.6312E+08
6	NSOL	1136 TEMP	c01i000	78.27	.3156E+11	237.7	.6312E+08
7	NSOL	1134 TEMP	h01o000	78.42	.3156E+11	240.3	.6312E+08
8	NSOL	1055 TEMP	s01o000	78.23	.3156E+11	238.0	.6312E+08
9	NSOL	1047 TEMP	t01o000	78.23	.3156E+11	238.0	.6312E+08
10	NSOL	1246 TEMP	s09i000	78.23	.3156E+11	238.0	.6312E+08
11	NSOL	1283 TEMP	h09i000	78.60	.3156E+11	242.3	.6312E+08
12	NSOL	1281 TEMP	c09i000	78.65	.3156E+11	242.1	.6312E+08
13	NSOL	1279 TEMP	h09o000	78.42	.3156E+11	237.9	.6312E+08
14	NSOL	1200 TEMP	s09o000	77.86	.3156E+11	229.1	.6312E+08
15	NSOL	1192 TEMP	t09o000	77.86	.3156E+11	229.0	.6312E+08
16	NSOL	1391 TEMP	s15i000	77.86	.3156E+11	229.0	.6312E+08
17	NSOL	1428 TEMP	h15i000	77.91	.3156E+11	227.6	.6312E+08
18	NSOL	1426 TEMP	c15i000	77.64	.3156E+11	221.5	.6312E+08
19	NSOL	1424 TEMP	h15o000	77.09	.3156E+11	211.5	.9467E+08
20	NSOL	1345 TEMP	s15o000	76.23	.3156E+11	196.7	.9467E+08
21	NSOL	1337 TEMP	t15o000	76.23	.3156E+11	196.7	.9467E+08
22	NSOL	1536 TEMP	s21i000	76.23	.3156E+11	196.6	.9467E+08
23	NSOL	1573 TEMP	h21i000	76.15	.3156E+11	193.4	.9467E+08
24	NSOL	1571 TEMP	c21i000	75.78	.3156E+11	186.1	.1262E+09
25	NSOL	1569 TEMP	h21o000	75.14	.3156E+11	174.4	.1578E+09
26	NSOL	1490 TEMP	s21o000	66.48	.1000E-05	155.9	.2209E+09
27	NSOL	1482 TEMP	t21o000	66.37	.1000E-05	155.8	.2209E+09
28	NSOL	4217 TEMP	i21i000	29.31	.1000E-05	135.2	.2525E+09
29	NSOL	4207 TEMP	i21o000	28.35	.1000E-05	134.3	.2525E+09
30	NSOL	4437 TEMP	o21o000	26.14	.1000E-05	132.7	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.060
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.061	139.072	139.178	158.715	168.730	172.061
.20000E-05	176.685	176.696	176.798	194.202	203.233	206.284
31.558	176.685	176.696	176.798	194.202	203.232	206.284
.31558E+07	199.846	199.856	199.956	216.120	224.542	227.448
.63116E+07	204.249	204.260	204.358	220.267	228.571	231.437
.94673E+07	206.730	206.741	206.838	222.561	230.773	233.608
.12623E+08	208.466	208.477	208.574	224.147	232.284	235.095
.15779E+08	209.781	209.792	209.889	225.334	233.409	236.199
.18935E+08	210.808	210.819	210.915	226.249	234.268	237.039
.22090E+08	211.645	211.656	211.751	226.984	234.953	237.706
.25246E+08	212.336	212.347	212.442	227.582	235.504	238.262
.28402E+08	212.911	212.922	213.016	228.071	235.950	238.672
.31558E+08	213.396	213.407	213.501	228.475	236.313	239.021
.63115E+08	215.692	215.702	215.793	230.154	237.680	240.279
.94673E+08	215.850	215.859	215.947	229.857	237.153	239.669
.12623E+09	215.214	215.224	215.309	228.855	235.962	238.411
.15779E+09	214.316	214.325	214.408	227.653	234.605	236.998
.18935E+09	212.951	212.960	213.041	225.992	232.791	235.129
.22090E+09	211.620	211.629	211.708	224.408	231.076	233.368
.25246E+09	210.344	210.353	210.431	222.896	229.443	231.691
.28402E+09	208.487	208.495	208.571	220.838	227.280	229.490
.31558E+09	206.897	206.906	206.980	219.082	225.437	227.615
.63115E+09	190.741	190.748	190.810	201.300	206.817	208.691
.94673E+09	176.621	176.627	176.681	185.881	190.730	192.370
.12623E+10	164.064	164.069	164.115	172.299	176.610	178.056
.15779E+10	153.549	153.553	153.593	160.889	164.729	166.004
.18935E+10	145.094	145.097	145.133	151.696	155.151	156.288
.22090E+10	138.098	138.101	138.132	144.069	147.198	148.225
.25246E+10	131.844	131.847	131.876	137.293	140.149	141.084
.28402E+10	127.008	127.011	127.037	132.035	134.670	135.530
.31558E+10	122.764	122.766	122.790	127.401	129.832	130.624
.63115E+10	102.214	102.216	102.230	105.056	106.548	107.027
.94673E+10	94.4411	94.4421	94.4527	96.6377	97.7917	98.1600
.12623E+11	90.0070	90.0079	90.0165	91.8277	92.7843	93.0886
.15779E+11	86.9095	86.9103	86.9177	88.4838	89.3109	89.5731
.18935E+11	84.1397	84.1404	84.1468	85.5188	86.2432	86.4724
.22090E+11	81.8823	81.8829	81.8887	83.1148	83.7621	83.9662
.25246E+11	79.9255	79.9260	79.9312	81.0326	81.6138	81.7968
.28402E+11	78.2640	78.2645	78.2691	79.2702	79.7984	79.9643
.31558E+11	76.8617	76.8622	76.8664	77.7851	78.2698	78.4219

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.070
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	168.702	168.701	168.718	175.450	175.913	170.949
.20000E-05	203.391	203.389	203.404	209.010	209.078	204.311
31.558	203.392	203.390	203.405	209.010	209.077	204.311
.31558E+07	224.896	224.894	224.909	229.905	229.825	225.296
.63116E+07	228.926	228.924	228.938	233.823	233.710	229.208
.94673E+07	231.126	231.123	231.137	235.945	235.811	231.335
.12623E+08	232.635	232.633	232.646	237.394	237.245	232.793
.15779E+08	233.757	233.755	233.769	238.467	238.307	233.877
.18935E+08	234.613	234.611	234.624	239.281	239.112	234.702

.22090E+08	235.296	235.294	235.307	239.927	239.750	235.360
.25246E+08	235.845	235.843	235.856	240.442	240.260	235.888
.28402E+08	236.288	236.286	236.299	240.854	240.667	236.313
.31558E+08	236.649	236.647	236.660	241.187	240.996	236.659
.63115E+08	237.994	237.992	238.005	242.332	242.125	237.932
.94673E+08	237.447	237.445	237.457	241.651	241.445	237.371
.12623E+09	236.239	236.237	236.249	240.341	240.142	236.171
.15779E+09	234.866	234.864	234.876	238.887	238.697	234.815
.18935E+09	233.038	233.035	233.047	236.982	236.804	233.011
.22090E+09	231.311	231.309	231.320	235.191	235.024	231.309
.25246E+09	229.666	229.664	229.675	233.487	233.330	229.688
.28402E+09	227.491	227.489	227.499	231.266	231.122	227.546
.31558E+09	225.636	225.634	225.645	229.374	229.242	225.720
.63115E+09	206.921	206.920	206.929	210.287	210.254	207.255
.94673E+09	190.779	190.778	190.786	193.829	193.863	191.270
.12623E+10	176.604	176.603	176.610	179.395	179.476	177.202
.15779E+10	164.675	164.674	164.680	167.228	167.342	165.339
.18935E+10	155.065	155.064	155.070	157.409	157.540	155.755
.22090E+10	147.103	147.102	147.107	149.256	149.394	147.789
.25246E+10	140.049	140.048	140.053	142.037	142.179	140.725
.28402E+10	134.568	134.567	134.572	136.420	136.562	135.228
.31558E+10	129.730	129.729	129.733	131.453	131.594	130.369
.63115E+10	106.457	106.456	106.459	107.559	107.675	106.941
.94673E+10	97.7123	97.7120	97.7139	98.5776	98.6748	98.1113
.12623E+11	92.7143	92.7141	92.7157	93.4375	93.5215	93.0562
.15779E+11	89.2470	89.2468	89.2481	89.8761	89.9510	89.5495
.18935E+11	86.1853	86.1851	86.1863	86.7386	86.8055	86.4544
.22090E+11	83.7080	83.7079	83.7089	84.2048	84.2658	83.9525
.25246E+11	81.5638	81.5637	81.5646	82.0117	82.0674	81.7865
.28402E+11	79.7517	79.7516	79.7525	80.1602	80.2118	79.9568
.31558E+11	78.2263	78.2262	78.2269	78.6021	78.6500	78.4165

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.090
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09o000	1192 TEMP t09o000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15o000
.10000E-05	159.460	159.424	159.407	159.336	152.840	140.500
.20000E-05	193.792	193.755	193.736	192.832	186.263	174.533
31.558	193.792	193.755	193.736	192.832	186.263	174.533
.31558E+07	215.496	215.459	215.440	214.184	207.732	196.529
.63116E+07	219.521	219.484	219.464	218.147	211.716	200.610
.94673E+07	221.737	221.700	221.680	220.329	213.924	202.902
.12623E+08	223.268	223.231	223.211	221.837	215.457	204.507
.15779E+08	224.415	224.378	224.358	222.967	216.611	205.725
.18935E+08	225.296	225.260	225.240	223.837	217.505	206.677
.22090E+08	226.006	225.970	225.950	224.538	218.230	207.457
.25246E+08	226.582	226.546	226.526	225.108	218.823	208.102
.28402E+08	227.053	227.017	226.997	225.575	219.313	208.641
.31558E+08	227.442	227.406	227.386	225.960	219.721	209.096
.63115E+08	229.055	229.021	229.002	227.581	221.541	211.304
.94673E+08	228.757	228.724	228.705	227.316	221.450	211.522
.12623E+09	227.776	227.743	227.725	226.376	220.664	210.998
.15779E+09	226.603	226.571	226.553	225.242	219.663	210.220
.18935E+09	224.982	224.951	224.934	223.669	218.227	209.009
.22090E+09	223.436	223.406	223.389	222.166	216.843	207.818
.25246E+09	221.962	221.932	221.916	220.731	215.520	206.675
.28402E+09	219.946	219.917	219.901	218.760	213.652	204.970
.31558E+09	218.227	218.198	218.183	217.078	212.057	203.510
.63115E+09	200.784	200.761	200.749	199.970	195.772	188.530
.94673E+09	185.615	185.596	185.586	185.044	181.487	175.257

.12623E+10	172.183	172.166	172.158	171.803	168.744	163.302
.15779E+10	160.870	160.856	160.849	160.631	157.984	153.204
.18935E+10	151.736	151.723	151.717	151.587	149.257	145.005
.22090E+10	144.159	144.147	144.142	144.068	141.997	138.186
.25246E+10	137.416	137.406	137.402	137.370	135.510	132.060
.28402E+10	132.178	132.169	132.165	132.162	130.469	127.306
.31558E+10	127.558	127.550	127.547	127.566	126.022	123.122
.63115E+10	105.223	105.218	105.216	105.296	104.405	102.676
.94673E+10	96.7826	96.7791	96.7777	96.8568	96.1808	94.8563
.12623E+11	91.9545	91.9516	91.9505	92.0247	91.4708	90.3785
.15779E+11	88.5965	88.5940	88.5931	88.6626	88.1877	87.2465
.18935E+11	85.6193	85.6172	85.6164	85.6807	85.2672	84.4446
.22090E+11	83.2059	83.2040	83.2033	83.2639	82.8968	82.1635
.25246E+11	81.1158	81.1141	81.1134	81.1705	80.8425	80.1854
.28402E+11	79.3472	79.3456	79.3451	79.3989	79.1024	78.5064
.31558E+11	77.8570	77.8556	77.8551	77.9061	77.6352	77.0893

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.100
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
.10000E-05	120.866	120.805	120.770	118.134	108.943	93.0563
.20000E-05	156.440	156.380	156.342	153.191	144.328	129.512
.31558E+07	156.440	156.380	156.343	153.191	144.328	129.512
.63116E+07	179.581	179.521	179.483	176.125	167.649	153.703
.94673E+07	183.853	183.793	183.755	180.364	171.951	158.163
.12623E+08	186.298	186.237	186.200	182.795	174.437	160.776
.15779E+08	188.030	187.970	187.932	184.522	176.213	162.658
.18935E+08	189.362	189.302	189.264	185.852	177.590	164.128
.22090E+08	190.417	190.357	190.319	186.909	178.689	165.311
.25246E+08	191.291	191.231	191.194	187.788	179.607	166.308
.28402E+08	192.024	191.965	191.928	188.526	180.384	167.158
.31558E+08	192.647	192.588	192.551	189.156	181.050	167.894
.63115E+08	193.182	193.123	193.086	189.698	181.628	168.538
.94673E+08	196.019	195.962	195.926	192.622	184.850	172.289
.12623E+09	196.725	196.670	196.635	193.422	185.894	173.748
.15779E+09	196.605	196.552	196.518	193.392	186.075	174.278
.18935E+09	196.167	196.115	196.082	193.034	185.896	174.392
.22090E+09	195.293	195.243	195.211	192.247	185.292	174.082
.25246E+09	194.393	194.343	194.312	191.423	184.625	173.666
.28402E+09	193.521	193.473	193.442	190.623	183.971	173.247
.31558E+09	192.053	192.006	191.976	189.226	182.707	172.191
.63115E+09	190.793	190.746	190.717	188.026	181.619	171.277
.94673E+09	177.727	177.689	177.665	175.519	170.164	161.461
.12623E+10	165.908	165.876	165.856	164.126	159.568	152.100
.15779E+10	155.079	155.052	155.036	153.613	149.658	143.137
.18935E+10	145.943	145.920	145.906	144.716	141.266	135.553
.22090E+10	138.534	138.513	138.501	137.486	134.437	129.367
.25246E+10	132.368	132.350	132.339	131.462	128.741	124.201
.28402E+10	126.778	126.762	126.753	125.986	123.534	119.427
.31558E+10	122.453	122.438	122.430	121.748	119.508	115.747
.63115E+10	118.662	118.648	118.641	118.033	115.986	112.539
.94673E+10	99.9893	99.9816	99.9772	99.6672	98.4677	96.4214
.12623E+11	92.7927	92.7869	92.7837	92.5599	91.6479	90.0852
.15779E+11	88.6731	88.6683	88.6657	88.4886	87.7398	86.4528
.18935E+11	85.7744	85.7704	85.7681	85.6201	84.9768	83.8685
.22090E+11	83.1566	83.1530	83.1511	83.0245	82.4632	81.4948
.25246E+11	81.0137	81.0106	81.0089	80.8988	80.3997	79.5369
.28402E+11	79.1538	79.1510	79.1494	79.0530	78.6066	77.8335
	77.5698	77.5672	77.5658	77.4802	77.0761	76.3752

1 .31558E+11 76.2305 76.2282 76.2269 76.1499 75.7802 75.1383

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:07 JUN 19, 1995 CP= 64633.110
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years.

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21i000	i21o000	o21o000
.10000E-05	66.4820	66.3736	29.3067	28.3486	26.1409
.20000E-05	104.971	104.856	72.3365	71.2830	69.0546
31.558	104.971	104.856	72.3364	71.2830	69.0546
.31558E+07	130.721	130.605	101.537	100.452	98.3033
.63116E+07	135.467	135.351	106.908	105.823	103.696
.94673E+07	138.311	138.196	110.200	109.118	107.010
.12623E+08	140.386	140.271	112.633	111.554	109.463
.15779E+08	142.024	141.909	114.576	113.500	111.424
.18935E+08	143.360	143.246	116.179	115.107	113.045
.22090E+08	144.498	144.384	117.558	116.489	114.440
.25246E+08	145.480	145.366	118.761	117.696	115.659
.28402E+08	146.341	146.227	119.826	118.765	116.739
.31558E+08	147.104	146.991	120.780	119.723	117.709
.63115E+08	151.788	151.679	126.895	125.875	123.949
.94673E+08	153.969	153.863	130.105	129.118	127.261
.12623E+09	155.094	154.990	132.046	131.087	129.289
.15779E+09	155.706	155.605	133.322	132.388	130.639
.18935E+09	155.889	155.791	134.146	133.237	131.537
.22090E+09	155.895	155.799	134.692	133.804	132.147
.25246E+09	155.867	155.774	135.164	134.297	132.679
.28402E+09	155.154	155.063	134.862	134.015	132.431
.31558E+09	154.525	154.436	134.577	133.746	132.190
.63115E+09	147.394	147.321	130.631	129.949	128.662
.94673E+09	140.060	139.999	125.657	125.086	123.999
.12623E+10	132.655	132.602	120.030	119.543	118.606
.15779E+10	126.375	126.330	115.268	114.850	114.038
.18935E+10	121.228	121.189	111.345	110.980	110.265
.22090E+10	116.917	116.882	108.048	107.727	107.091
.25246E+10	112.840	112.809	104.798	104.511	103.940
.28402E+10	109.714	109.686	102.335	102.076	101.555
.31558E+10	107.012	106.987	100.242	100.007	99.5322
.63115E+10	93.1482	93.1336	89.1074	88.9755	88.7065
.94673E+10	87.5871	87.5762	84.4923	84.3942	84.1922
.12623E+11	84.3955	84.3866	81.8422	81.7624	81.5979
.15779E+11	82.0971	82.0895	79.8954	79.8276	79.6867
.18935E+11	79.9472	79.9406	78.0200	77.9611	77.8388
.22090E+11	78.1578	78.1520	76.4385	76.3866	76.2779
.25246E+11	76.5978	76.5927	75.0559	75.0095	74.9129
.28402E+11	75.2548	75.2501	73.8553	73.8137	73.7263
.31558E+11	74.1120	74.1077	72.8293	72.7912	72.7117

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 64633.260 TIME= 09:59:07
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045

VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045

VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045
 VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045
 VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045
 VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045
 VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045
 VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045
 VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045
 VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045
 VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045
 VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045
 VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045
 VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045
 VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045
 VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045
 VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045
 VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045
 VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045
 VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045
 VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045
 VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3526 TEMP	ts1i045	76.88	.3156E+11	216.2	.9467E+08
3	NSOL	1017 TEMP	t01i045	76.88	.3156E+11	216.2	.9467E+08
4	NSOL	1025 TEMP	s01i045	76.88	.3156E+11	216.2	.9467E+08
5	NSOL	1124 TEMP	h01i045	77.51	.3156E+11	225.8	.6312E+08
6	NSOL	1136 TEMP	c01i045	78.27	.3156E+11	237.7	.6312E+08
7	NSOL	1148 TEMP	h01o045	78.69	.3156E+11	244.6	.6312E+08
8	NSOL	1051 TEMP	s01o045	78.86	.3156E+11	247.6	.6312E+08
9	NSOL	1043 TEMP	t01o045	78.88	.3156E+11	247.8	.6312E+08
10	NSOL	2040 TEMP	s11i045	78.89	.3156E+11	248.1	.6312E+08
11	NSOL	2139 TEMP	h11i045	79.42	.3156E+11	254.2	.6312E+08
12	NSOL	2151 TEMP	c11i045	79.54	.3156E+11	253.9	.6312E+08
13	NSOL	2163 TEMP	h11o045	79.03	.3156E+11	244.6	.6312E+08
14	NSOL	2066 TEMP	s11o045	78.12	.3156E+11	228.6	.6312E+08
15	NSOL	2058 TEMP	t11o045	78.08	.3156E+11	227.8	.6312E+08
16	NSOL	2910 TEMP	s19i045	78.04	.3156E+11	227.1	.6312E+08
17	NSOL	3009 TEMP	h19i045	77.40	.3156E+11	213.6	.9467E+08
18	NSOL	3021 TEMP	c19i045	76.32	.3156E+11	193.6	.9467E+08
19	NSOL	3033 TEMP	h19o045	74.68	.3156E+11	165.3	.1578E+09
20	NSOL	2936 TEMP	s19o045	35.53	.1000E-05	137.3	.2525E+09
21	NSOL	2928 TEMP	t19o045	34.03	.1000E-05	136.5	.2525E+09
22	NSOL	4182 TEMP	i19o045	29.46	.1000E-05	133.7	.2525E+09
23	NSOL	4411 TEMP	o19o045	26.14	.1000E-05	131.7	.2525E+09

24 NSOL	2876 TEMP	c13i045	77.92	.3156E+11	222.8	.6312E+08
25 NSOL	2296 TEMP	c17i045	77.95	.3156E+11	223.2	.6312E+08
26 NSOL	1490 TEMP	s21o000	66.48	.1000E-05	155.9	.2209E+09
27 NSOL	1482 TEMP	t21o000	66.37	.1000E-05	155.8	.2209E+09
28 NSOL	4217 TEMP	i21i000	29.31	.1000E-05	135.2	.2525E+09
29 NSOL	4207 TEMP	i21o000	28.35	.1000E-05	134.3	.2525E+09
30 NSOL	4437 TEMP	o21o000	26.14	.1000E-05	132.7	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:11 JUN 19, 1995 CP= 64636.330
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	139.404	139.404	139.410	152.796	168.730	177.938
.20000E-05	177.026	177.026	177.033	188.912	203.233	211.591
.31558E+07	177.026	177.027	177.033	188.912	203.232	211.591
.63116E+07	200.208	200.217	200.226	211.257	224.542	232.335
.94673E+07	204.611	204.620	204.629	215.481	228.571	236.253
.12623E+08	207.090	207.100	207.109	217.831	230.773	238.370
.15779E+08	208.826	208.835	208.844	219.462	232.284	239.814
.18935E+08	210.139	210.149	210.157	220.688	233.409	240.881
.22090E+08	211.165	211.174	211.183	221.636	234.268	241.688
.25246E+08	212.000	212.009	212.018	222.402	234.953	242.326
.28402E+08	212.690	212.699	212.708	223.028	235.504	242.834
.31558E+08	213.264	213.273	213.282	223.542	235.950	243.239
.63115E+08	213.747	213.757	213.765	223.971	236.313	243.563
.94673E+08	216.031	216.040	216.048	225.834	237.680	244.635
.12623E+09	216.179	216.187	216.196	225.673	237.153	243.888
.15779E+09	215.534	215.543	215.551	224.780	235.962	242.518
.18935E+09	214.628	214.636	214.644	223.668	234.605	241.011
.22090E+09	213.255	213.264	213.271	222.095	232.791	239.051
.25246E+09	211.917	211.925	211.933	220.587	231.076	237.211
.28402E+09	210.635	210.643	210.650	219.145	229.443	235.462
.31558E+09	208.771	208.779	208.786	217.146	227.280	233.200
.63115E+09	207.176	207.184	207.191	215.439	225.437	231.273
.94673E+09	190.972	190.978	190.984	198.135	206.817	211.854
.12623E+10	176.816	176.822	176.827	183.103	190.730	195.147
.15779E+10	164.231	164.236	164.240	169.827	176.610	180.519
.18935E+10	153.693	153.698	153.702	158.686	164.729	168.188
.22090E+10	145.220	145.224	145.228	149.713	155.151	158.244
.25246E+10	138.210	138.214	138.217	142.275	147.198	149.993
.28402E+10	131.945	131.949	131.952	135.656	140.149	142.695
.31558E+10	127.100	127.103	127.106	130.524	134.670	137.016
.63115E+10	122.848	122.851	122.853	126.007	129.832	131.992
.94673E+10	102.263	102.265	102.267	104.202	106.548	107.861
.12623E+11	94.4782	94.4798	94.4810	95.9774	97.7917	98.8029
.15779E+11	90.0376	90.0390	90.0399	91.2807	92.7843	93.6205
.18935E+11	86.9359	86.9371	86.9379	88.0109	89.3109	90.0320
.22090E+11	84.1626	84.1637	84.1644	85.1047	86.2432	86.8740
.25246E+11	81.9028	81.9037	81.9044	82.7447	83.7621	84.3244
.28402E+11	79.9437	79.9446	79.9452	80.7003	81.6138	82.1182
.31558E+11	78.2806	78.2814	78.2819	78.9682	79.7984	80.2560
	76.8769	76.8776	76.8781	77.5081	78.2698	78.6893

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:11 JUN 19, 1995 CP= 64636.340
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.226	182.619	182.987	192.562	194.134	184.166
.20000E-05	215.298	215.631	215.943	223.958	224.554	214.575
31.558	215.298	215.631	215.943	223.957	224.553	214.574
.31558E+07	235.713	236.012	236.290	243.365	243.428	233.616
.63116E+07	239.563	239.856	240.128	247.048	247.025	237.225
.94673E+07	241.629	241.918	242.186	248.993	248.914	239.149
.12623E+08	243.034	243.319	243.584	250.303	250.183	240.453
.15779E+08	244.067	244.350	244.612	251.258	251.108	241.411
.18935E+08	244.846	245.125	245.385	251.970	251.795	242.132
.22090E+08	245.458	245.736	245.993	252.523	252.328	242.698
.25246E+08	245.942	246.218	246.473	252.954	252.743	243.145
.28402E+08	246.325	246.599	246.853	253.288	253.064	243.498
.31558E+08	246.630	246.902	247.154	253.548	253.311	243.777
.63115E+08	247.551	247.811	248.051	254.151	253.857	244.599
.94673E+08	246.696	246.947	247.179	253.086	252.778	243.759
.12623E+09	245.242	245.486	245.711	251.472	251.168	242.362
.15779E+09	243.666	243.905	244.126	249.769	249.475	240.855
.18935E+09	241.639	241.873	242.089	247.622	247.348	238.919
.22090E+09	239.744	239.974	240.186	245.628	245.372	237.110
.25246E+09	237.943	238.168	238.377	243.733	243.495	235.390
.28402E+09	235.638	235.860	236.065	241.357	241.145	233.186
.31558E+09	233.677	233.896	234.098	239.336	239.146	231.309
.63115E+09	213.926	214.119	214.299	219.001	219.006	212.337
.94673E+09	196.965	197.138	197.299	201.573	201.716	195.944
.12623E+10	182.133	182.288	182.434	186.336	186.573	181.523
.15779E+10	169.612	169.752	169.883	173.441	173.738	169.300
.18935E+10	159.509	159.637	159.756	163.017	163.348	159.399
.22090E+10	151.129	151.245	151.354	154.355	154.705	151.159
.25246E+10	143.730	143.837	143.937	146.713	147.070	143.858
.28402E+10	137.969	138.068	138.161	140.746	141.103	138.159
.31558E+10	132.870	132.962	133.048	135.454	135.805	133.105
.63115E+10	108.392	108.449	108.503	110.042	110.327	108.718
.94673E+10	99.2107	99.2553	99.2973	100.506	100.745	99.5112
.12623E+11	93.9571	93.9942	94.0292	95.0392	95.2455	94.2279
.15779E+11	90.3216	90.3537	90.3841	91.2621	91.4460	90.5693
.18935E+11	87.1267	87.1549	87.1815	87.9540	88.1185	87.3530
.22090E+11	84.5493	84.5746	84.5984	85.2915	85.4418	84.7597
.25246E+11	82.3194	82.3421	82.3635	82.9884	83.1257	82.5148
.28402E+11	80.4384	80.4590	80.4785	81.0481	81.1750	80.6211
.31558E+11	78.8562	78.8752	78.8931	79.4172	79.5352	79.0280

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:11 JUN 19, 1995 CP= 64636.360
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	165.514	164.688	163.836	149.017	123.960	83.2203
.20000E-05	196.572	195.760	194.922	180.113	156.329	119.365
31.558	196.572	195.760	194.922	180.113	156.329	119.366
.31558E+07	216.294	215.503	214.687	200.146	177.412	143.025
.63116E+07	220.007	219.220	218.409	203.933	181.399	147.523
.94673E+07	222.039	221.257	220.450	206.050	183.689	150.199
.12623E+08	223.438	222.659	221.856	207.524	185.314	152.140
.15779E+08	224.482	223.707	222.908	208.639	186.565	153.662

.18935E+08	225.283	224.511	223.715	209.508	187.558	154.898
.22090E+08	225.924	225.156	224.363	210.214	188.380	155.943
.25246E+08	226.443	225.678	224.889	210.796	189.072	156.841
.28402E+08	226.864	226.102	225.316	211.279	189.660	157.622
.31558E+08	227.209	226.450	225.668	211.685	190.167	158.310
.63115E+08	228.582	227.849	227.092	213.573	192.870	162.421
.94673E+08	228.192	227.480	226.745	213.617	193.562	164.177
.12623E+09	227.181	226.487	225.771	212.985	193.476	164.965
.15779E+09	226.003	225.325	224.625	212.133	193.087	165.301
.18935E+09	224.403	223.740	223.057	210.866	192.285	165.215
.22090E+09	222.882	222.233	221.565	209.635	191.454	164.995
.25246E+09	221.432	220.796	220.141	208.455	190.647	164.756
.28402E+09	219.473	218.849	218.206	206.746	189.274	163.875
.31558E+09	217.801	217.187	216.555	205.284	188.092	163.104
.63115E+09	200.792	200.273	199.738	190.270	175.756	154.624
.94673E+09	185.932	185.487	185.029	176.956	164.488	146.264
.12623E+10	172.723	172.335	171.936	164.956	154.066	138.090
.15779E+10	161.538	161.199	160.851	154.778	145.211	131.156
.18935E+10	152.473	152.173	151.864	146.504	138.006	125.488
.22090E+10	144.928	144.660	144.384	139.606	131.990	120.745
.25246E+10	138.206	137.964	137.715	133.413	126.520	116.320
.28402E+10	132.969	132.747	132.519	128.594	122.277	112.913
.31558E+10	128.336	128.134	127.925	124.339	118.548	109.949
.63115E+10	105.852	105.733	105.610	103.520	100.073	94.9146
.94673E+10	97.3089	97.2177	97.1239	95.5365	92.9008	88.9450
.12623E+11	92.4088	92.3338	92.2566	90.9549	88.7837	85.5177
.15779E+11	89.0006	88.9361	88.8698	87.7530	85.8837	83.0667
.18935E+11	85.9817	85.9254	85.8675	84.8950	83.2620	80.7973
.22090E+11	83.5367	83.4867	83.4352	82.5713	81.1169	78.9181
.25246E+11	81.4183	81.3735	81.3275	80.5558	79.2530	77.2808
.28402E+11	79.6263	79.5858	79.5440	78.8460	77.6651	75.8751
.31558E+11	78.1164	78.0793	78.0411	77.4033	76.3218	74.6808

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:11 JUN 19, 1995 CP= 64636.370
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
.10000E-05	35.5303	34.0301	29.4556	26.1409	160.478	160.478
.20000E-05	77.5131	76.2026	72.0685	69.0248	190.959	190.969
31.558	77.5131	76.2025	72.0685	69.0248	190.959	190.969
.31558E+07	105.008	103.820	100.002	97.1330	210.274	210.663
.63116E+07	110.243	109.080	105.332	102.513	213.957	214.354
.94673E+07	113.451	112.305	108.609	105.830	215.988	216.385
.12623E+08	115.821	114.689	111.035	108.288	217.391	217.789
.15779E+08	117.709	116.590	112.971	110.253	218.444	218.842
.18935E+08	119.268	118.159	114.573	111.879	219.256	219.653
.22090E+08	120.605	119.506	115.949	113.277	219.911	220.308
.25246E+08	121.772	120.683	117.152	114.501	220.444	220.840
.28402E+08	122.804	121.723	118.217	115.585	220.880	221.277
.31558E+08	123.728	122.654	119.173	116.559	221.242	221.637
.63115E+08	129.616	128.602	125.307	122.831	222.774	223.165
.94673E+08	132.676	131.703	128.545	126.169	222.538	222.925
.12623E+09	134.505	133.566	130.517	128.221	221.670	222.052
.15779E+09	135.694	134.782	131.821	129.592	220.619	220.996
.18935E+09	136.436	135.550	132.675	130.510	219.153	219.525
.22090E+09	136.914	136.051	133.248	131.137	217.750	218.119
.25246E+09	137.323	136.480	133.743	131.683	216.410	216.775
.28402E+09	136.986	136.160	133.479	131.461	214.561	214.918
.31558E+09	136.668	135.856	133.221	131.238	212.981	213.333
.63115E+09	132.398	131.716	129.507	127.850	196.823	197.134

.94673E+09	127.187	126.601	124.707	123.290	182.630	182.906
.12623E+10	121.394	120.881	119.225	117.990	169.954	170.199
.15779E+10	116.475	116.024	114.572	113.489	159.192	159.413
.18935E+10	112.423	112.021	110.732	109.771	150.442	150.644
.22090E+10	109.016	108.656	107.501	106.639	143.142	143.328
.25246E+10	105.681	105.354	104.308	103.528	136.622	136.793
.28402E+10	103.147	102.847	101.888	101.172	131.540	131.700
.31558E+10	100.985	100.709	99.8298	99.1741	127.044	127.195
.63115E+10	89.5523	89.3874	88.8648	88.4803	105.144	105.242
.94673E+10	84.8318	84.7052	84.3058	84.0123	96.7828	96.8614
.12623E+11	82.1206	82.0160	81.6864	81.4450	91.9833	92.0505
.15779E+11	80.1353	80.0451	79.7613	79.5532	88.6398	88.6986
.18935E+11	78.2313	78.1522	77.9037	77.7220	85.6705	85.7220
.22090E+11	76.6277	76.5571	76.3358	76.1737	83.2632	83.3092
.25246E+11	75.2258	75.1624	74.9638	74.8188	81.1760	81.2176
.28402E+11	74.0091	73.9515	73.7715	73.6398	79.4086	79.4469
.31558E+11	72.9698	72.9170	72.7518	72.6314	77.9185	77.9541

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64636.510 TIME= 09:59:11
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180

VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180

VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180

VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180

VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180

VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180

VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180

VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180
 STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3824 TEMP	ts2i180	76.88	.3156E+11	216.1	.9467E+08
3	NSOL	1021 TEMP	t02i180	76.88	.3156E+11	216.1	.9467E+08
4	NSOL	1031 TEMP	s02i180	76.88	.3156E+11	216.1	.9467E+08
5	NSOL	1122 TEMP	h02i180	77.79	.3156E+11	230.3	.6312E+08
6	NSOL	1136 TEMP	c02i180	78.27	.3156E+11	237.7	.6312E+08
7	NSOL	1150 TEMP	h02o180	78.41	.3156E+11	240.2	.6312E+08
8	NSOL	1079 TEMP	s02o180	78.21	.3156E+11	237.8	.6312E+08
9	NSOL	1071 TEMP	t02o180	78.21	.3156E+11	237.8	.6312E+08
10	NSOL	1901 TEMP	s10i180	78.21	.3156E+11	237.8	.6312E+08
11	NSOL	1992 TEMP	h10i180	78.58	.3156E+11	242.1	.6312E+08
12	NSOL	2006 TEMP	c10i180	78.62	.3156E+11	241.8	.6312E+08
13	NSOL	2020 TEMP	h10o180	78.38	.3156E+11	237.5	.6312E+08
14	NSOL	1949 TEMP	s10o180	77.81	.3156E+11	228.5	.6312E+08
15	NSOL	1941 TEMP	t10o180	77.81	.3156E+11	228.4	.6312E+08
16	NSOL	2626 TEMP	s16i180	77.81	.3156E+11	228.4	.6312E+08
17	NSOL	2717 TEMP	h16i180	77.85	.3156E+11	226.9	.6312E+08
18	NSOL	2731 TEMP	c16i180	77.57	.3156E+11	220.8	.6312E+08
19	NSOL	2745 TEMP	h16o180	77.01	.3156E+11	210.7	.9467E+08
20	NSOL	2674 TEMP	s16o180	76.15	.3156E+11	195.7	.9467E+08
21	NSOL	2666 TEMP	t16o180	76.14	.3156E+11	195.7	.9467E+08
22	NSOL	3061 TEMP	s22i180	76.14	.3156E+11	195.6	.9467E+08
23	NSOL	3152 TEMP	h22i180	76.06	.3156E+11	192.3	.9467E+08
24	NSOL	3166 TEMP	c22i180	75.68	.3156E+11	184.9	.1262E+09
25	NSOL	3180 TEMP	h22o180	75.03	.3156E+11	173.1	.1578E+09
26	NSOL	3109 TEMP	s22o180	66.48	.1000E-05	154.4	.2209E+09
27	NSOL	3101 TEMP	t22o180	66.37	.1000E-05	154.3	.2209E+09
28	NSOL	4254 TEMP	i22i180	29.31	.1000E-05	133.3	.2525E+09
29	NSOL	4157 TEMP	i22o180	28.35	.1000E-05	132.4	.2525E+09
30	NSOL	4385 TEMP	o22o180	26.14	.1000E-05	130.7	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:14 JUN 19, 1995 CP= 64640.250
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.061	139.072	139.178	158.715	168.730	172.061
.20000E-05	176.690	176.701	176.804	194.204	203.233	206.282
31.558	176.691	176.702	176.804	194.204	203.232	206.281
.31558E+07	200.060	200.071	200.169	216.220	224.542	227.351
.63116E+07	204.465	204.476	204.574	220.369	228.571	231.339
.94673E+07	206.946	206.957	207.054	222.662	230.773	233.510
.12623E+08	208.682	208.692	208.789	224.248	232.284	234.998

.15779E+08	209.996	210.007	210.103	225.435	233.409	236.101
.18935E+08	211.023	211.033	211.129	226.350	234.268	236.941
.22090E+08	211.859	211.869	211.964	227.085	234.953	237.609
.25246E+08	212.549	212.560	212.654	227.683	235.504	238.145
.28402E+08	213.124	213.134	213.228	228.171	235.950	238.575
.31558E+08	213.608	213.619	213.712	228.575	236.313	238.924
.63115E+08	215.899	215.909	215.999	230.252	237.680	240.184
.94673E+08	216.053	216.063	216.150	229.954	237.153	239.576
.12623E+09	215.414	215.423	215.508	228.950	235.962	238.320
.15779E+09	214.512	214.521	214.604	227.746	234.605	236.908
.18935E+09	213.144	213.153	213.234	226.084	232.791	235.040
.22090E+09	211.810	211.819	211.898	224.498	231.076	233.280
.25246E+09	210.532	210.541	210.618	222.986	229.443	231.604
.28402E+09	208.670	208.679	208.754	220.926	227.280	229.406
.31558E+09	207.077	207.086	207.160	219.167	225.437	227.532
.63115E+09	190.897	190.903	190.966	201.374	206.817	208.619
.94673E+09	176.758	176.764	176.817	185.947	190.730	192.306
.12623E+10	164.184	164.189	164.235	172.356	176.610	177.999
.15779E+10	153.656	153.661	153.700	160.941	164.729	165.954
.18935E+10	145.191	145.195	145.230	151.743	155.151	156.242
.22090E+10	138.187	138.190	138.221	144.112	147.198	148.182
.25246E+10	131.926	131.929	131.957	137.333	140.149	141.045
.28402E+10	127.084	127.087	127.112	132.072	134.670	135.494
.31558E+10	122.835	122.838	122.861	127.435	129.832	130.590
.63115E+10	102.260	102.261	102.275	105.079	106.548	107.005
.94673E+10	94.4776	94.4787	94.4891	96.6556	97.7917	98.1423
.12623E+11	90.0382	90.0391	90.0477	91.8430	92.7843	93.0735
.15779E+11	86.9368	86.9375	86.9449	88.4972	89.3109	89.5599
.18935E+11	84.1636	84.1643	84.1707	85.5306	86.2432	86.4608
.22090E+11	81.9037	81.9043	81.9100	83.1253	83.7621	83.9558
.25246E+11	79.9448	79.9453	79.9504	81.0421	81.6138	81.7874
.28402E+11	78.2818	78.2822	78.2868	79.2789	79.7984	79.9557
.31558E+11	76.8782	76.8787	76.8829	77.7932	78.2698	78.4139

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:14 JUN 19, 1995 CP= 64640.260
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP s02o180	1071 TEMP t02o180	1901 TEMP s10i180	1992 TEMP h10i180	2006 TEMP c10i180	2020 TEMP h10o180
.10000E-05	168.702	168.701	168.718	175.450	175.913	170.949
.20000E-05	203.386	203.384	203.399	209.003	209.068	204.299
31.558	203.387	203.384	203.400	209.002	209.068	204.299
.31558E+07	224.700	224.697	224.711	229.620	229.449	224.820
.63116E+07	228.727	228.724	228.738	233.534	233.328	228.726
.94673E+07	230.926	230.924	230.937	235.656	235.429	230.853
.12623E+08	232.436	232.434	232.447	237.106	236.864	232.313
.15779E+08	233.559	233.556	233.569	238.179	237.926	233.397
.18935E+08	234.416	234.413	234.426	238.994	238.732	234.223
.22090E+08	235.098	235.096	235.109	239.640	239.371	234.881
.25246E+08	235.648	235.645	235.658	240.156	239.881	235.410
.28402E+08	236.092	236.089	236.102	240.569	240.290	235.837
.31558E+08	236.453	236.450	236.463	240.902	240.619	236.183
.63115E+08	237.802	237.799	237.811	242.052	241.754	237.465
.94673E+08	237.258	237.255	237.267	241.375	241.080	236.911
.12623E+09	236.053	236.051	236.062	240.070	239.783	235.719
.15779E+09	234.684	234.681	234.692	238.620	238.344	234.369
.18935E+09	232.858	232.855	232.866	236.719	236.455	232.572
.22090E+09	231.134	231.131	231.142	234.932	234.680	230.875
.25246E+09	229.491	229.488	229.499	233.230	232.990	229.259
.28402E+09	227.319	227.317	227.327	231.015	230.790	227.126
.31558E+09	225.468	225.465	225.475	229.128	228.915	225.308

.63115E+09	206.775	206.773	206.781	210.071	209.968	206.895
.94673E+09	190.650	190.648	190.656	193.638	193.609	190.950
.12623E+10	176.490	176.489	176.496	179.227	179.253	176.921
.15779E+10	164.573	164.572	164.578	167.077	167.140	165.086
.18935E+10	154.972	154.971	154.976	157.271	157.356	155.523
.22090E+10	147.017	147.016	147.021	149.129	149.224	147.576
.25246E+10	139.971	139.970	139.974	141.921	142.024	140.529
.28402E+10	134.495	134.494	134.498	136.311	136.417	135.046
.31558E+10	129.661	129.660	129.664	131.351	131.457	130.198
.63115E+10	106.412	106.412	106.414	107.493	107.587	106.831
.94673E+10	97.6769	97.6766	97.6783	98.5244	98.6038	98.0222
.12623E+11	92.6841	92.6838	92.6853	93.3920	93.4609	92.9801
.15779E+11	89.2205	89.2203	89.2216	89.8363	89.8979	89.4828
.18935E+11	86.1621	86.1619	86.1630	86.7037	86.7589	86.3960
.22090E+11	83.6873	83.6871	83.6881	84.1735	84.2241	83.9002
.25246E+11	81.5451	81.5449	81.5458	81.9834	82.0298	81.7393
.28402E+11	79.7345	79.7344	79.7352	80.1342	80.1771	79.9134
.31558E+11	78.2102	78.2101	78.2108	78.5780	78.6178	78.3761

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:14 JUN 19, 1995 CP= 64640.280
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1949 TEMP s10o180	1941 TEMP t10o180	2626 TEMP s16i180	2717 TEMP h16i180	2731 TEMP c16i180	2745 TEMP h16o180
.10000E-05	159.460	159.424	159.407	159.336	152.840	140.500
.20000E-05	193.777	193.740	193.721	192.815	186.244	174.511
31.558	193.777	193.740	193.721	192.814	186.243	174.510
.31558E+07	214.906	214.869	214.849	213.507	206.955	195.633
.63116E+07	218.923	218.886	218.866	217.462	210.929	199.703
.94673E+07	221.140	221.102	221.082	219.644	213.137	201.995
.12623E+08	222.672	222.635	222.615	221.153	214.672	203.603
.15779E+08	223.820	223.783	223.763	222.284	215.827	204.823
.18935E+08	224.704	224.667	224.646	223.156	216.723	205.778
.22090E+08	225.414	225.377	225.357	223.858	217.449	206.558
.25246E+08	225.992	225.955	225.935	224.430	218.044	207.206
.28402E+08	226.464	226.427	226.407	224.898	218.535	207.746
.31558E+08	226.854	226.818	226.797	225.285	218.945	208.204
.63115E+08	228.478	228.443	228.423	226.917	220.779	210.427
.94673E+08	228.190	228.156	228.137	226.662	220.700	210.660
.12623E+09	227.218	227.185	227.167	225.733	219.925	210.150
.15779E+09	226.053	226.021	226.003	224.609	218.936	209.385
.18935E+09	224.440	224.409	224.391	223.044	217.510	208.185
.22090E+09	222.902	222.871	222.854	221.549	216.135	207.005
.25246E+09	221.433	221.403	221.386	220.121	214.819	205.871
.28402E+09	219.430	219.400	219.384	218.164	212.967	204.184
.31558E+09	217.719	217.690	217.674	216.491	211.383	202.737
.63115E+09	200.342	200.318	200.305	199.457	195.182	187.856
.94673E+09	185.224	185.204	185.193	184.590	180.965	174.662
.12623E+10	171.838	171.821	171.812	171.403	168.285	162.778
.15779E+10	160.560	160.546	160.539	160.271	157.571	152.732
.18935E+10	151.454	151.441	151.435	151.259	148.879	144.575
.22090E+10	143.899	143.888	143.883	143.765	141.649	137.790
.25246E+10	137.178	137.168	137.164	137.093	135.192	131.698
.28402E+10	131.957	131.947	131.943	131.904	130.172	126.968
.31558E+10	127.350	127.342	127.338	127.323	125.742	122.804
.63115E+10	105.089	105.084	105.082	105.139	104.224	102.471
.94673E+10	96.6750	96.6714	96.6699	96.7305	96.0356	94.6917
.12623E+11	91.8625	91.8596	91.8584	91.9168	91.3468	90.2381
.15779E+11	88.5160	88.5135	88.5125	88.5681	88.0792	87.1236
.18935E+11	85.5488	85.5466	85.5457	85.5979	85.1720	84.3369
.22090E+11	83.1429	83.1409	83.1402	83.1899	82.8117	82.0672

.25246E+11	81.0588	81.0571	81.0564	81.1036	80.7656	80.0983
.28402E+11	79.2948	79.2932	79.2926	79.3373	79.0317	78.4264
.31558E+11	77.8083	77.8069	77.8063	77.8489	77.5695	77.0149

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:14 JUN 19, 1995 CP= 64640.290
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	120.866	120.805	120.770	118.134	108.943	93.0563
.20000E-05	156.414	156.353	156.316	153.162	144.295	129.476
31.558	156.414	156.353	156.316	153.162	144.295	129.476
.31558E+07	178.540	178.479	178.441	174.991	166.390	152.274
.63116E+07	182.801	182.740	182.701	179.216	170.677	156.720
.94673E+07	185.245	185.185	185.146	181.647	173.164	159.333
.12623E+08	186.981	186.921	186.883	183.377	174.943	161.220
.15779E+08	188.314	188.254	188.216	184.709	176.321	162.692
.18935E+08	189.372	189.312	189.274	185.770	177.425	163.881
.22090E+08	190.248	190.188	190.150	186.649	178.345	164.880
.25246E+08	190.985	190.925	190.887	187.391	179.125	165.735
.28402E+08	191.609	191.550	191.512	188.022	179.794	166.473
.31558E+08	192.147	192.088	192.050	188.568	180.375	167.122
.63115E+08	195.004	194.947	194.910	191.513	183.621	170.900
.94673E+08	195.727	195.672	195.636	192.331	184.685	172.384
.12623E+09	195.625	195.571	195.537	192.320	184.887	172.937
.15779E+09	195.202	195.150	195.116	191.978	184.726	173.073
.18935E+09	194.344	194.292	194.260	191.207	184.139	172.783
.22090E+09	193.456	193.406	193.374	190.397	183.488	172.386
.25246E+09	192.595	192.546	192.515	189.608	182.847	171.981
.28402E+09	191.149	191.101	191.070	188.235	181.609	170.955
.31558E+09	189.904	189.857	189.827	187.052	180.539	170.062
.63115E+09	176.955	176.917	176.893	174.673	169.227	160.409
.94673E+09	165.227	165.195	165.175	163.378	158.740	151.170
.12623E+10	154.482	154.454	154.437	152.956	148.928	142.321
.15779E+10	145.407	145.383	145.369	144.125	140.611	134.821
.18935E+10	138.046	138.025	138.013	136.949	133.842	128.703
.22090E+10	131.920	131.901	131.890	130.968	128.194	123.591
.25246E+10	126.368	126.352	126.342	125.534	123.033	118.869
.28402E+10	122.071	122.056	122.047	121.326	119.042	115.227
.31558E+10	118.303	118.289	118.281	117.636	115.547	112.051
.63115E+10	99.7584	99.7506	99.7461	99.4115	98.1851	96.1079
.94673E+10	92.6080	92.6021	92.5988	92.3552	91.4218	89.8348
.12623E+11	88.5155	88.5107	88.5080	88.3141	87.5471	86.2393
.15779E+11	85.6366	85.6325	85.6302	85.4674	84.8082	83.6819
.18935E+11	83.0359	83.0323	83.0303	82.8907	82.3155	81.3314
.22090E+11	80.9059	80.9027	80.9010	80.7793	80.2677	79.3908
.25246E+11	79.0563	79.0535	79.0519	78.9450	78.4873	77.7016
.28402E+11	77.4802	77.4776	77.4762	77.3809	76.9664	76.2539
.31558E+11	76.1473	76.1449	76.1436	76.0576	75.6783	75.0256

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:15 JUN 19, 1995 CP= 64640.300
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4819	66.3736	29.3067	28.3486	26.1409
.20000E-05	104.929	104.814	72.2805	71.2267	68.9951
31.558	104.929	104.814	72.2804	71.2267	68.9951
.31558E+07	129.051	128.934	99.3399	98.2410	95.9628
.63116E+07	133.778	133.662	104.695	103.596	101.330
.94673E+07	136.624	136.508	107.992	106.895	104.650
.12623E+08	138.704	138.588	110.436	109.342	107.114
.15779E+08	140.344	140.228	112.384	111.293	109.081
.18935E+08	141.686	141.571	113.997	112.911	110.712
.22090E+08	142.827	142.712	115.382	114.299	112.115
.25246E+08	143.814	143.700	116.594	115.515	113.343
.28402E+08	144.678	144.564	117.666	116.591	114.431
.31558E+08	145.446	145.333	118.629	117.558	115.409
.63115E+08	150.166	150.056	124.804	123.769	121.713
.94673E+08	152.377	152.270	128.063	127.060	125.077
.12623E+09	153.532	153.428	130.049	129.075	127.154
.15779E+09	154.170	154.068	131.364	130.414	128.545
.18935E+09	154.378	154.279	132.224	131.301	129.482
.22090E+09	154.406	154.310	132.802	131.901	130.127
.25246E+09	154.397	154.303	133.300	132.420	130.686
.28402E+09	153.720	153.627	133.047	132.186	130.490
.31558E+09	153.116	153.026	132.796	131.951	130.286
.63115E+09	146.181	146.106	129.111	128.418	127.038
.94673E+09	138.995	138.933	124.332	123.750	122.582
.12623E+10	131.723	131.670	118.876	118.381	117.373
.15779E+10	125.542	125.496	114.241	113.816	112.941
.18935E+10	120.473	120.433	110.418	110.047	109.276
.22090E+10	116.225	116.190	107.201	106.874	106.187
.25246E+10	112.209	112.177	104.026	103.734	103.116
.28402E+10	109.127	109.098	101.618	101.354	100.790
.31558E+10	106.461	106.435	99.5706	99.3304	98.8161
.63115E+10	92.7968	92.7820	88.6829	88.5482	88.2541
.94673E+10	87.3071	87.2960	84.1547	84.0544	83.8324
.12623E+11	84.1571	84.1480	81.5551	81.4734	81.2920
.15779E+11	81.8888	81.8811	79.6447	79.5753	79.4197
.18935E+11	79.7649	79.7582	77.8007	77.7403	77.6052
.22090E+11	77.9950	77.9891	76.2427	76.1896	76.0694
.25246E+11	76.4509	76.4456	74.8792	74.8317	74.7247
.28402E+11	75.1197	75.1150	73.6930	73.6504	73.5534
.31558E+11	73.9866	73.9822	72.6786	72.6396	72.5512

 Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64640.450 TIME= 09:59:15
 NSQL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 71 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 22 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 120 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 161 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 252 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12	IS AT NODE	266	ITEM= TEMP COMP=	NAME= c10i180
VARIABLE 13	IS AT NODE	280	ITEM= TEMP COMP=	NAME= h10o180
VARIABLE 14	IS AT NODE	209	ITEM= TEMP COMP=	NAME= s10o180
VARIABLE 15	IS AT NODE	201	ITEM= TEMP COMP=	NAME= t10o180
VARIABLE 16	IS AT NODE	306	ITEM= TEMP COMP=	NAME= s16i180
VARIABLE 17	IS AT NODE	397	ITEM= TEMP COMP=	NAME= h16i180
VARIABLE 18	IS AT NODE	411	ITEM= TEMP COMP=	NAME= c16i180
VARIABLE 19	IS AT NODE	425	ITEM= TEMP COMP=	NAME= h16o180
VARIABLE 20	IS AT NODE	354	ITEM= TEMP COMP=	NAME= s16o180
VARIABLE 21	IS AT NODE	346	ITEM= TEMP COMP=	NAME= t16o180
VARIABLE 22	IS AT NODE	451	ITEM= TEMP COMP=	NAME= s22i180
VARIABLE 23	IS AT NODE	542	ITEM= TEMP COMP=	NAME= h22i180
VARIABLE 24	IS AT NODE	556	ITEM= TEMP COMP=	NAME= c22i180
VARIABLE 25	IS AT NODE	570	ITEM= TEMP COMP=	NAME= h22o180
VARIABLE 26	IS AT NODE	499	ITEM= TEMP COMP=	NAME= s22o180
VARIABLE 27	IS AT NODE	491	ITEM= TEMP COMP=	NAME= t22o180
VARIABLE 28	IS AT NODE	3991	ITEM= TEMP COMP=	NAME= i22i180
VARIABLE 29	IS AT NODE	3981	ITEM= TEMP COMP=	NAME= i22o180
VARIABLE 30	IS AT NODE	4617	ITEM= TEMP COMP=	NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3802 TEMP	ts2i180	76.85	.3156E+11	215.7	.9467E+08
3	NSOL	87 TEMP	t02i180	76.85	.3156E+11	215.8	.9467E+08
4	NSOL	6 TEMP	s02i180	76.86	.3156E+11	215.8	.9467E+08
5	NSOL	43 TEMP	h02i180	77.77	.3156E+11	230.0	.6312E+08
6	NSOL	57 TEMP	c02i180	78.25	.3156E+11	237.4	.6312E+08
7	NSOL	71 TEMP	h02o180	78.39	.3156E+11	239.9	.6312E+08
8	NSOL	22 TEMP	s02o180	78.19	.3156E+11	237.5	.6312E+08
9	NSOL	120 TEMP	t02o180	78.19	.3156E+11	237.5	.6312E+08
10	NSOL	161 TEMP	s10i180	78.19	.3156E+11	237.5	.6312E+08
11	NSOL	252 TEMP	h10i180	78.55	.3156E+11	241.8	.6312E+08
12	NSOL	266 TEMP	c10i180	78.59	.3156E+11	241.5	.6312E+08
13	NSOL	280 TEMP	h10o180	78.35	.3156E+11	237.2	.6312E+08
14	NSOL	209 TEMP	s10o180	77.78	.3156E+11	228.2	.6312E+08
15	NSOL	201 TEMP	t10o180	77.78	.3156E+11	228.2	.6312E+08
16	NSOL	306 TEMP	s16i180	77.78	.3156E+11	228.2	.6312E+08
17	NSOL	397 TEMP	h16i180	77.82	.3156E+11	226.7	.6312E+08
18	NSOL	411 TEMP	c16i180	77.54	.3156E+11	220.5	.6312E+08
19	NSOL	425 TEMP	h16o180	76.99	.3156E+11	210.4	.9467E+08
20	NSOL	354 TEMP	s16o180	76.12	.3156E+11	195.5	.9467E+08
21	NSOL	346 TEMP	t16o180	76.12	.3156E+11	195.4	.9467E+08
22	NSOL	451 TEMP	s22i180	76.12	.3156E+11	195.4	.9467E+08
23	NSOL	542 TEMP	h22i180	76.03	.3156E+11	192.1	.9467E+08
24	NSOL	556 TEMP	c22i180	75.65	.3156E+11	184.6	.1262E+09
25	NSOL	570 TEMP	h22o180	75.00	.3156E+11	172.8	.1578E+09
26	NSOL	499 TEMP	s22o180	66.48	.1000E-05	154.2	.2209E+09
27	NSOL	491 TEMP	t22o180	66.37	.1000E-05	154.1	.2209E+09
28	NSOL	3991 TEMP	i22i180	29.31	.1000E-05	133.0	.2525E+09

29 NSOL 3981 TEMP i22o180 28.35 .1000E-05 132.2 .2525E+09
 30 NSOL 4617 TEMP o22o180 26.14 .1000E-05 130.5 .2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:19 JUN 19, 1995 CP= 64644.190
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.061	139.072	139.178	158.715	168.730	172.061
.20000E-05	176.682	176.693	176.795	194.197	203.225	206.275
31.558	176.682	176.693	176.795	194.196	203.225	206.274
.31558E+07	199.733	199.744	199.843	215.921	224.260	227.079
.63116E+07	204.135	204.146	204.244	220.066	228.284	231.062
.94673E+07	206.617	206.628	206.725	222.360	230.486	233.233
.12623E+08	208.354	208.365	208.461	223.946	231.998	234.721
.15779E+08	209.670	209.680	209.776	225.134	233.123	235.825
.18935E+08	210.697	210.708	210.803	226.050	233.983	236.666
.22090E+08	211.534	211.545	211.640	226.785	234.669	237.334
.25246E+08	212.226	212.236	212.331	227.384	235.221	237.871
.28402E+08	212.801	212.812	212.906	227.873	235.667	238.302
.31558E+08	213.287	213.297	213.391	228.278	236.031	238.651
.63115E+08	215.585	215.595	215.686	229.961	237.404	239.916
.94673E+08	215.745	215.755	215.843	229.668	236.881	239.312
.12623E+09	215.112	215.122	215.206	228.669	235.695	238.060
.15779E+09	214.215	214.225	214.308	227.470	234.342	236.652
.18935E+09	212.853	212.862	212.942	225.812	232.531	234.788
.22090E+09	211.523	211.532	211.611	224.230	230.820	233.031
.25246E+09	210.248	210.257	210.334	222.721	229.189	231.358
.28402E+09	208.393	208.402	208.477	220.667	227.033	229.165
.31558E+09	206.805	206.813	206.888	218.913	225.193	227.294
.63115E+09	190.661	190.668	190.730	201.152	206.603	208.410
.94673E+09	176.551	176.557	176.610	185.750	190.540	192.120
.12623E+10	164.002	164.007	164.053	172.183	176.442	177.834
.15779E+10	153.493	153.498	153.537	160.785	164.577	165.805
.18935E+10	145.043	145.047	145.082	151.601	155.012	156.106
.22090E+10	138.051	138.054	138.085	143.981	147.070	148.056
.25246E+10	131.801	131.804	131.833	137.213	140.032	140.929
.28402E+10	126.968	126.971	126.996	131.960	134.561	135.386
.31558E+10	122.726	122.728	122.752	127.330	129.729	130.488
.63115E+10	102.190	102.191	102.205	105.010	106.481	106.938
.94673E+10	94.4213	94.4224	94.4328	96.6006	97.7376	98.0887
.12623E+11	89.9902	89.9910	89.9996	91.7960	92.7380	93.0276
.15779E+11	86.8947	86.8954	86.9028	88.4560	89.2703	89.5196
.18935E+11	84.1267	84.1274	84.1338	85.4945	86.2076	86.4255
.22090E+11	81.8707	81.8712	81.8769	83.0930	83.7302	83.9242
.25246E+11	79.9149	79.9154	79.9205	81.0128	81.5849	81.7587
.28402E+11	78.2542	78.2547	78.2593	79.2520	79.7718	79.9293
.31558E+11	76.8526	76.8530	76.8573	77.7681	78.2451	78.3893

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:19 JUN 19, 1995 CP= 64644.200
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP	120 TEMP	161 TEMP	252 TEMP	266 TEMP	280 TEMP
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	s02o180	t02o180	s10i180	h10i180	c10i180	h10o180
.10000E-05	168.702	168.701	168.718	175.450	175.913	170.949
.20000E-05	203.379	203.377	203.392	208.996	209.062	204.292
31.558	203.380	203.378	203.393	208.996	209.061	204.292
.31558E+07	224.433	224.430	224.444	229.362	229.196	224.569
.63116E+07	228.456	228.453	228.467	233.271	233.070	228.469
.94673E+07	230.655	230.652	230.666	235.392	235.170	230.596
.12623E+08	232.166	232.163	232.176	236.843	236.605	232.056
.15779E+08	233.289	233.286	233.299	237.917	237.668	233.140
.18935E+08	234.146	234.143	234.156	238.732	238.474	233.967
.22090E+08	234.829	234.826	234.839	239.378	239.113	234.626
.25246E+08	235.380	235.377	235.390	239.895	239.624	235.156
.28402E+08	235.824	235.821	235.834	240.308	240.033	235.582
.31558E+08	236.185	236.183	236.195	240.641	240.363	235.929
.63115E+08	237.539	237.536	237.549	241.796	241.502	237.215
.94673E+08	237.000	236.997	237.009	241.123	240.832	236.665
.12623E+09	235.799	235.796	235.808	239.822	239.539	235.476
.15779E+09	234.433	234.430	234.441	238.375	238.102	234.129
.18935E+09	232.610	232.608	232.618	236.477	236.217	232.335
.22090E+09	230.889	230.887	230.897	234.693	234.445	230.641
.25246E+09	229.248	229.246	229.257	232.993	232.756	229.026
.28402E+09	227.082	227.080	227.090	230.784	230.562	226.899
.31558E+09	225.234	225.232	225.242	228.899	228.690	225.084
.63115E+09	206.569	206.567	206.576	209.870	209.769	206.696
.94673E+09	190.466	190.464	190.472	193.457	193.430	190.771
.12623E+10	176.327	176.326	176.332	179.066	179.093	176.762
.15779E+10	164.425	164.424	164.430	166.931	166.996	164.942
.18935E+10	154.837	154.836	154.841	157.138	157.224	155.391
.22090E+10	146.892	146.891	146.896	149.005	149.102	147.454
.25246E+10	139.856	139.855	139.860	141.807	141.911	140.417
.28402E+10	134.388	134.387	134.391	136.205	136.312	134.940
.31558E+10	129.560	129.559	129.563	131.250	131.358	130.098
.63115E+10	106.346	106.346	106.348	107.427	107.521	106.765
.94673E+10	97.6235	97.6232	97.6250	98.4713	98.5510	97.9694
.12623E+11	92.6384	92.6381	92.6396	93.3465	93.4156	92.9348
.15779E+11	89.1805	89.1802	89.1815	89.7964	89.8581	89.4431
.18935E+11	86.1269	86.1267	86.1278	86.6687	86.7240	86.3611
.22090E+11	83.6558	83.6556	83.6566	84.1422	84.1929	83.8690
.25246E+11	81.5165	81.5164	81.5172	81.9550	82.0014	81.7110
.28402E+11	79.7082	79.7081	79.7089	80.1081	80.1510	79.8873
.31558E+11	78.1858	78.1856	78.1864	78.5536	78.5935	78.3519

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:19 JUN 19, 1995 CP= 64644.230
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
.10000E-05	159.460	159.424	159.407	159.336	152.840	140.500
.20000E-05	193.770	193.733	193.714	192.808	186.237	174.504
31.558	193.770	193.733	193.715	192.808	186.237	174.504
.31558E+07	214.653	214.616	214.596	213.255	206.700	195.370
.63116E+07	218.666	218.628	218.608	217.205	210.669	199.434
.94673E+07	220.881	220.844	220.824	219.386	212.876	201.726
.12623E+08	222.415	222.378	222.357	220.896	214.411	203.334
.15779E+08	223.562	223.525	223.505	222.027	215.567	204.554
.18935E+08	224.447	224.410	224.390	222.900	216.464	205.510
.22090E+08	225.157	225.121	225.100	223.602	217.189	206.290
.25246E+08	225.736	225.699	225.679	224.174	217.785	206.938
.28402E+08	226.208	226.172	226.152	224.642	218.276	207.479
.31558E+08	226.599	226.563	226.543	225.030	218.687	207.938

.63115E+08	228.227	228.192	228.173	226.666	220.525	210.165
.94673E+08	227.942	227.908	227.889	226.415	220.449	210.401
.12623E+09	226.974	226.941	226.923	225.489	219.678	209.894
.15779E+09	225.812	225.780	225.762	224.368	218.691	209.132
.18935E+09	224.202	224.171	224.153	222.806	217.268	207.936
.22090E+09	222.667	222.636	222.619	221.314	215.896	206.759
.25246E+09	221.200	221.169	221.153	219.887	214.582	205.627
.28402E+09	219.201	219.172	219.156	217.935	212.735	203.945
.31558E+09	217.494	217.465	217.449	216.265	211.154	202.501
.63115E+09	200.142	200.118	200.105	199.256	194.979	187.648
.94673E+09	185.044	185.024	185.014	184.410	180.783	174.475
.12623E+10	171.678	171.661	171.653	171.243	168.123	162.612
.15779E+10	160.416	160.401	160.394	160.126	157.424	152.582
.18935E+10	151.321	151.309	151.303	151.125	148.744	144.437
.22090E+10	143.777	143.765	143.760	143.642	141.525	137.663
.25246E+10	137.066	137.055	137.051	136.979	135.077	131.581
.28402E+10	131.851	131.842	131.838	131.798	130.064	126.859
.31558E+10	127.250	127.242	127.238	127.222	125.641	122.700
.63115E+10	105.023	105.018	105.016	105.073	104.157	102.403
.94673E+10	96.6221	96.6185	96.6170	96.6773	95.9818	94.6371
.12623E+11	91.8172	91.8143	91.8131	91.8712	91.3007	90.1913
.15779E+11	88.4763	88.4738	88.4727	88.5281	88.0387	87.0825
.18935E+11	85.5139	85.5117	85.5109	85.5628	85.1365	84.3009
.22090E+11	83.1116	83.1097	83.1089	83.1584	82.7799	82.0350
.25246E+11	81.0305	81.0287	81.0281	81.0750	80.7368	80.0691
.28402E+11	79.2687	79.2671	79.2665	79.3111	79.0052	78.3995
.31558E+11	77.7840	77.7826	77.7820	77.8245	77.5448	76.9899

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:19 JUN 19, 1995 CP= 64644.240
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44. BWR UCF/WP at 100 years.

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	120.866	120.805	120.770	118.134	108.943	93.0563
.20000E-05	156.406	156.346	156.309	153.155	144.289	129.469
.31558E+07	156.407	156.346	156.309	153.155	144.288	129.469
.63116E+07	178.263	178.202	178.163	174.716	166.115	151.996
.94673E+07	182.518	182.457	182.419	178.936	170.397	156.438
.12623E+08	184.962	184.902	184.863	181.366	172.883	159.051
.15779E+08	186.698	186.638	186.600	183.096	174.663	160.938
.18935E+08	188.031	187.971	187.933	184.428	176.041	162.410
.22090E+08	189.090	189.030	188.992	185.490	177.145	163.601
.25246E+08	189.966	189.907	189.869	186.370	178.066	164.600
.28402E+08	190.703	190.644	190.606	187.112	178.847	165.456
.31558E+08	191.328	191.269	191.231	187.744	179.516	166.195
.63115E+08	191.867	191.808	191.770	188.290	180.098	166.844
.94673E+08	194.728	194.671	194.634	191.239	183.348	170.628
.12623E+09	195.455	195.400	195.364	192.061	184.417	172.117
.15779E+09	195.357	195.303	195.269	192.054	184.622	172.674
.18935E+09	194.937	194.885	194.851	191.716	184.465	172.814
.22090E+09	194.082	194.031	193.998	190.948	183.882	172.527
.25246E+09	193.198	193.148	193.116	190.141	183.234	172.133
.28402E+09	192.339	192.290	192.259	189.354	182.594	171.731
.31558E+09	190.898	190.851	190.820	187.987	181.363	170.711
.63115E+09	189.657	189.610	189.581	186.807	180.297	169.821
.94673E+09	176.738	176.700	176.676	174.458	169.015	160.199
.12623E+10	165.033	165.001	164.981	163.187	158.550	150.983
.15779E+10	154.310	154.282	154.266	152.786	148.760	142.157
.18935E+10	145.252	145.228	145.214	143.972	140.460	134.673
.22090E+10	137.904	137.884	137.871	136.808	133.704	128.568
.25246E+10	131.789	131.771	131.760	130.838	128.067	123.467

.25246E+10	126.248	126.232	126.222	125.415	122.916	118.755
.28402E+10	121.959	121.944	121.935	121.215	118.933	115.121
.31558E+10	118.197	118.183	118.175	117.531	115.445	111.951
.63115E+10	99.6893	99.6815	99.6770	99.3432	98.1183	96.0432
.94673E+10	92.5524	92.5465	92.5431	92.3004	91.3682	89.7829
.12623E+11	88.4680	88.4632	88.4605	88.2672	87.5012	86.1951
.15779E+11	85.5949	85.5908	85.5885	85.4263	84.7680	83.6431
.18935E+11	82.9993	82.9957	82.9937	82.8546	82.2803	81.2974
.22090E+11	80.8732	80.8700	80.8682	80.7470	80.2362	79.3604
.25246E+11	79.0267	79.0238	79.0222	78.9157	78.4587	77.6741
.28402E+11	77.4529	77.4503	77.4489	77.3540	76.9401	76.2286
.31558E+11	76.1219	76.1195	76.1182	76.0325	75.6539	75.0021

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:19 JUN 19, 1995 CP= 64644.260
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP	491 TEMP	3991 TEMP	3981 TEMP	4617 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4820	66.3736	29.3067	28.3486	26.1409
.20000E-05	104.921	104.806	72.2723	71.2185	68.9885
31.558	104.921	104.807	72.2722	71.2185	68.9885
.31558E+07	128.767	128.650	99.0221	97.9232	95.7083
.63116E+07	133.491	133.374	104.375	103.276	101.073
.94673E+07	136.336	136.220	107.674	106.577	104.393
.12623E+08	138.417	138.301	110.119	109.025	106.859
.15779E+08	140.058	139.943	112.068	110.978	108.827
.18935E+08	141.401	141.286	113.683	112.596	110.460
.22090E+08	142.543	142.428	115.070	113.987	111.863
.25246E+08	143.531	143.417	116.283	115.204	113.093
.28402E+08	144.396	144.282	117.356	116.281	114.182
.31558E+08	145.165	145.051	118.320	117.249	115.161
.63115E+08	149.891	149.781	124.505	123.469	121.472
.94673E+08	152.107	152.000	127.771	126.768	124.843
.12623E+09	153.267	153.163	129.764	128.789	126.924
.15779E+09	153.909	153.808	131.084	130.135	128.320
.18935E+09	154.122	154.023	131.950	131.026	129.262
.22090E+09	154.154	154.057	132.533	131.631	129.910
.25246E+09	154.147	154.053	133.034	132.154	130.473
.28402E+09	153.476	153.384	132.788	131.927	130.282
.31558E+09	152.877	152.786	132.541	131.697	130.082
.63115E+09	145.973	145.899	128.894	128.200	126.863
.94673E+09	138.812	138.750	124.141	123.560	122.430
.12623E+10	131.562	131.509	118.710	118.215	117.240
.15779E+10	125.397	125.352	114.093	113.668	112.822
.18935E+10	120.342	120.302	110.284	109.913	109.169
.22090E+10	116.105	116.069	107.079	106.751	106.089
.25246E+10	112.098	112.067	103.914	103.622	103.026
.28402E+10	109.024	108.995	101.514	101.250	100.707
.31558E+10	106.364	106.338	99.4729	99.2328	98.7378
.63115E+10	92.7346	92.7198	88.6208	88.4861	88.2043
.94673E+10	87.2572	87.2462	84.1051	84.0048	83.7927
.12623E+11	84.1146	84.1056	81.5129	81.4312	81.2582
.15779E+11	81.8516	81.8439	79.6078	79.5384	79.3901
.18935E+11	79.7323	79.7256	77.7684	77.7080	77.5792
.22090E+11	77.9659	77.9600	76.2138	76.1607	76.0463
.25246E+11	76.4245	76.4192	74.8530	74.8056	74.7037
.28402E+11	75.0955	75.0907	73.6690	73.6263	73.5341
.31558E+11	73.9640	73.9596	72.6563	72.6172	72.5333

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 64644.400 TIME= 09:59:19
 NSOL command erases all previously stored or calculated data
 unless STORE, MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135

VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135

VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135

VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135

VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135

VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135

VARIABLE 10 IS AT NODE 1607 ITEM= TEMP COMP= NAME= s12i135

VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135

VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135

VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135

VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135

VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135

VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135

VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135

VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135

VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135

VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135

VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135

VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= i20o135

VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
 Add centers of assemblies 13 and 17

VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135

VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3526 TEMP	ts2i135	76.88	.3156E+11	216.2	.9467E+08
3 NSOL	82 TEMP	t02i135	76.88	.3156E+11	216.2	.9467E+08
4 NSOL	1 TEMP	s02i135	76.88	.3156E+11	216.2	.9467E+08
5 NSOL	41 TEMP	h02i135	77.50	.3156E+11	225.7	.6312E+08
6 NSOL	57 TEMP	c02i135	78.25	.3156E+11	237.4	.6312E+08
7 NSOL	73 TEMP	h02o135	78.65	.3156E+11	244.2	.6312E+08
8 NSOL	10 TEMP	s02o135	78.81	.3156E+11	247.0	.6312E+08
9 NSOL	116 TEMP	t02o135	78.83	.3156E+11	247.3	.6312E+08
10 NSOL	1607 TEMP	s12i135	78.84	.3156E+11	247.5	.6312E+08
11 NSOL	1700 TEMP	h12i135	79.36	.3156E+11	253.5	.6312E+08
12 NSOL	1716 TEMP	c12i135	79.46	.3156E+11	253.1	.6312E+08

13	NSOL	1732	TEMP	h12o135	78.94	.3156E+11	243.8	.6312E+08
14	NSOL	1655	TEMP	s12o135	78.02	.3156E+11	227.6	.6312E+08
15	NSOL	1647	TEMP	t12o135	77.98	.3156E+11	226.9	.6312E+08
16	NSOL	2477	TEMP	s20i135	77.95	.3156E+11	226.1	.6312E+08
17	NSOL	2570	TEMP	h20i135	77.30	.3156E+11	212.5	.9467E+08
18	NSOL	2586	TEMP	c20i135	76.21	.3156E+11	192.3	.9467E+08
19	NSOL	2602	TEMP	h20o135	74.56	.3156E+11	163.9	.1578E+09
20	NSOL	2525	TEMP	s20o135	35.53	.1000E-05	135.8	.2525E+09
21	NSOL	2517	TEMP	t20o135	34.03	.1000E-05	134.9	.2525E+09
22	NSOL	3956	TEMP	i20o135	29.46	.1000E-05	132.2	.2525E+09
23	NSOL	4591	TEMP	o20o135	26.14	.1000E-05	130.1	.2525E+09
24	NSOL	2441	TEMP	c14i135	77.85	.3156E+11	222.1	.6312E+08
25	NSOL	1861	TEMP	c18i135	77.83	.3156E+11	221.9	.6312E+08
26	NSOL	499	TEMP	s22o180	66.48	.1000E-05	154.2	.2209E+09
27	NSOL	491	TEMP	t22o180	66.37	.1000E-05	154.1	.2209E+09
28	NSOL	3991	TEMP	i22i180	29.31	.1000E-05	133.0	.2525E+09
29	NSOL	3981	TEMP	i22o180	28.35	.1000E-05	132.2	.2525E+09
30	NSOL	4617	TEMP	o22o180	26.14	.1000E-05	130.5	.2525E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:22 JUN 19, 1995 CP= 64647.480
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts2i135	82 TEMP t02i135	1 TEMP s02i135	41 TEMP h02i135	57 TEMP c02i135	73 TEMP h02o135
.10000E-05	139.404	139.404	139.410	152.796	168.730	177.938
.20000E-05	177.026	177.026	177.032	188.908	203.225	211.581
31.558	177.026	177.026	177.032	188.908	203.225	211.580
.31558E+07	200.208	200.199	200.201	211.100	224.260	231.932
.63116E+07	204.611	204.601	204.604	215.322	228.284	235.843
.94673E+07	207.090	207.081	207.083	217.672	230.486	237.960
.12623E+08	208.826	208.816	208.819	219.304	231.998	239.406
.15779E+08	210.139	210.130	210.132	220.530	233.123	240.473
.18935E+08	211.165	211.156	211.158	221.479	233.983	241.281
.22090E+08	212.000	211.991	211.993	222.245	234.669	241.919
.25246E+08	212.690	212.681	212.683	222.871	235.221	242.428
.28402E+08	213.264	213.254	213.257	223.386	235.667	242.834
.31558E+08	213.747	213.738	213.741	223.815	236.031	243.159
.63115E+08	216.031	216.022	216.024	225.681	237.404	244.239
.94673E+08	216.179	216.170	216.172	225.523	236.881	243.498
.12623E+09	215.534	215.525	215.528	224.633	235.695	242.134
.15779E+09	214.628	214.619	214.621	223.524	234.342	240.632
.18935E+09	213.255	213.247	213.249	221.953	232.531	238.677
.22090E+09	211.917	211.909	211.911	220.446	230.820	236.843
.25246E+09	210.635	210.627	210.629	219.006	229.189	235.097
.28402E+09	208.771	208.763	208.765	217.011	227.033	232.843
.31558E+09	207.176	207.168	207.170	215.306	225.193	230.922
.63115E+09	190.972	190.965	190.966	198.019	206.603	211.545
.94673E+09	176.816	176.810	176.811	183.000	190.540	194.871
.12623E+10	164.231	164.225	164.226	169.736	176.442	180.274
.15779E+10	153.693	153.688	153.689	158.605	164.577	167.967
.18935E+10	145.220	145.216	145.216	149.639	155.012	158.042
.22090E+10	138.210	138.206	138.207	142.207	147.070	149.806
.25246E+10	131.945	131.942	131.942	135.594	140.032	142.523
.28402E+10	127.100	127.097	127.097	130.466	134.561	136.855
.31558E+10	122.848	122.844	122.845	125.952	129.729	131.840
.63115E+10	102.263	102.261	102.261	104.167	106.481	107.761
.94673E+10	94.4782	94.4766	94.4767	95.9489	97.7376	98.7229
.12623E+11	90.0376	90.0362	90.0363	91.2564	92.7380	93.5520
.15779E+11	86.9359	86.9347	86.9347	87.9896	89.2703	89.9719
.18935E+11	84.1626	84.1616	84.1616	85.0860	86.2076	86.8212
.22090E+11	81.9028	81.9018	81.9018	82.7280	83.7302	84.2772

.25246E+11	79.9437	79.9429	79.9429	80.6851	81.5849	82.0754
.28402E+11	78.2806	78.2798	78.2798	78.9542	79.7718	80.2166
.31558E+11	76.8769	76.8761	76.8761	77.4951	78.2451	78.6526

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:22 JUN 19, 1995 CP= 64647.490
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.226	182.619	182.987	192.562	194.134	184.166
.20000E-05	215.284	215.618	215.929	223.942	224.535	214.553
.31558E+07	215.284	215.618	215.929	223.941	224.535	214.553
.63116E+07	235.197	235.491	235.764	242.745	242.707	232.775
.94673E+07	239.037	239.325	239.592	246.415	246.288	236.366
.12623E+08	241.103	241.387	241.649	248.359	248.175	238.288
.15779E+08	242.509	242.789	243.048	249.670	249.446	239.594
.18935E+08	243.543	243.820	244.077	250.626	250.371	240.553
.22090E+08	244.323	244.597	244.852	251.339	251.060	241.275
.25246E+08	244.936	245.208	245.460	251.892	251.594	241.842
.28402E+08	245.421	245.692	245.942	252.325	252.010	242.291
.31558E+08	245.805	246.074	246.322	252.660	252.332	242.644
.63115E+08	246.111	246.378	246.624	252.921	252.581	242.925
.94673E+08	247.041	247.296	247.531	253.535	253.137	243.760
.12623E+09	246.194	246.440	246.667	252.477	252.067	242.931
.15779E+09	244.747	244.986	245.207	250.871	250.466	241.544
.18935E+09	243.178	243.412	243.627	249.176	248.782	240.047
.22090E+09	241.158	241.386	241.597	247.037	246.663	238.121
.25246E+09	239.269	239.493	239.700	245.049	244.694	236.320
.28402E+09	237.472	237.692	237.896	243.159	242.822	234.606
.31558E+09	235.178	235.395	235.595	240.796	240.487	232.419
.63115E+09	233.223	233.437	233.635	238.783	238.498	230.553
.94673E+09	213.526	213.715	213.890	218.511	218.430	211.666
.12623E+10	196.606	196.775	196.932	201.131	201.196	195.338
.15779E+10	181.813	181.966	182.108	185.942	186.108	180.982
.18935E+10	169.323	169.460	169.588	173.084	173.316	168.809
.22090E+10	159.245	159.369	159.485	162.689	162.961	158.949
.25246E+10	150.884	150.998	151.104	154.052	154.347	150.742
.28402E+10	143.505	143.609	143.707	146.433	146.739	143.473
.31558E+10	137.759	137.855	137.945	140.484	140.793	137.799
.63115E+10	132.672	132.761	132.845	135.206	135.512	132.764
.94673E+10	108.262	108.318	108.370	109.879	110.133	108.493
.12623E+11	99.1056	99.1490	99.1898	100.374	100.588	99.3294
.15779E+11	93.8671	93.9031	93.9371	94.9261	95.1109	94.0720
.18935E+11	90.2425	90.2738	90.3032	91.1628	91.3278	90.4324
.22090E+11	87.0573	87.0847	87.1106	87.8668	88.0147	87.2328
.25246E+11	84.4872	84.5118	84.5349	85.2134	85.3488	84.6520
.28402E+11	82.2631	82.2851	82.3059	82.9176	83.0414	82.4172
.31558E+11	80.3866	80.4066	80.4255	80.9829	81.0974	80.5312
	78.8079	78.8263	78.8437	79.3564	79.4628	78.9442

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:22 JUN 19, 1995 CP= 64647.500
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	165.514	164.688	163.836	149.017	123.960	83.2203
.20000E-05	196.547	195.735	194.896	180.085	156.297	119.326
31.558	196.547	195.735	194.896	180.085	156.297	119.327
.31558E+07	215.316	214.519	213.696	199.035	176.142	141.501
.63116E+07	219.010	218.217	217.399	202.801	180.108	145.980
.94673E+07	221.041	220.252	219.438	204.917	182.397	148.658
.12623E+08	222.442	221.657	220.847	206.395	184.026	150.604
.15779E+08	223.487	222.706	221.900	207.511	185.278	152.131
.18935E+08	224.289	223.512	222.709	208.382	186.274	153.372
.22090E+08	224.932	224.157	223.359	209.090	187.099	154.422
.25246E+08	225.453	224.681	223.886	209.674	187.794	155.325
.28402E+08	225.875	225.107	224.315	210.159	188.384	156.110
.31558E+08	226.223	225.458	224.669	210.567	188.893	156.803
.63115E+08	227.611	226.871	226.109	212.473	191.620	160.952
.94673E+08	227.235	226.516	225.775	212.533	192.331	162.737
.12623E+09	226.236	225.536	224.814	211.916	192.264	163.550
.15779E+09	225.070	224.386	223.680	211.077	191.891	163.909
.18935E+09	223.481	222.812	222.123	209.823	191.105	163.845
.22090E+09	221.970	221.315	220.641	208.604	190.288	163.644
.25246E+09	220.527	219.886	219.225	207.433	189.493	163.421
.28402E+09	218.587	217.958	217.309	205.745	188.145	162.570
.31558E+09	216.928	216.309	215.671	204.298	186.981	161.821
.63115E+09	200.018	199.494	198.955	189.398	174.779	153.506
.94673E+09	185.237	184.788	184.325	176.175	163.615	145.274
.12623E+10	172.104	171.712	171.310	164.261	153.291	137.218
.15779E+10	160.977	160.635	160.283	154.148	144.511	130.373
.18935E+10	151.958	151.655	151.344	145.928	137.367	124.776
.22090E+10	144.453	144.182	143.903	139.073	131.400	120.090
.25246E+10	137.768	137.523	137.272	132.923	125.978	115.719
.28402E+10	132.558	132.335	132.104	128.135	121.770	112.352
.31558E+10	127.949	127.744	127.533	123.906	118.070	109.421
.63115E+10	105.598	105.477	105.353	103.235	99.7607	94.5734
.94673E+10	97.1034	97.0111	96.9162	95.3071	92.6494	88.6716
.12623E+11	92.2327	92.1567	92.0786	90.7585	88.5688	85.2843
.15779E+11	88.8461	88.7807	88.7136	87.5806	85.6952	82.8622
.18935E+11	85.8460	85.7890	85.7304	84.7437	83.0966	80.6180
.22090E+11	83.4153	83.3646	83.3125	82.4359	80.9688	78.7577
.25246E+11	81.3082	81.2629	81.2162	80.4331	79.1189	77.1356
.28402E+11	79.5250	79.4839	79.4416	78.7330	77.5416	75.7415
.31558E+11	78.0220	77.9844	77.9457	77.2980	76.2068	74.5565

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:22 JUN 19, 1995 CP= 64647.510
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP s20o135	2517 TEMP t20o135	3956 TEMP i20o135	4591 TEMP o20o135	2441 TEMP c14i135	1861 TEMP c18i135
.10000E-05	35.5303	34.0301	29.4556	26.1409	160.478	160.478
.20000E-05	77.4654	76.1545	72.0197	68.9755	190.941	190.937
31.558	77.4653	76.1545	72.0197	68.9755	190.941	190.936
.31558E+07	103.164	101.965	98.1114	95.2240	209.562	209.391
.63116E+07	108.387	107.213	103.432	100.586	213.231	213.058
.94673E+07	111.599	110.443	106.715	103.909	215.260	215.087
.12623E+08	113.978	112.836	109.150	106.378	216.665	216.492
.15779E+08	115.873	114.743	111.093	108.349	217.718	217.546
.18935E+08	117.441	116.322	112.704	109.985	218.532	218.360
.22090E+08	118.786	117.676	114.088	111.392	219.187	219.016
.25246E+08	119.961	118.861	115.299	112.624	219.721	219.551
.28402E+08	120.999	119.907	116.371	113.715	220.159	219.989

.31558E+08	121.931	120.847	117.335	114.697	220.522	220.352
.63115E+08	127.875	126.851	123.525	121.026	222.064	221.899
.94673E+08	130.976	129.994	126.807	124.410	221.838	221.675
.12623E+09	132.843	131.895	128.818	126.502	220.979	220.818
.15779E+09	134.063	133.143	130.155	127.907	219.936	219.778
.18935E+09	134.836	133.942	131.041	128.857	218.478	218.321
.22090E+09	135.341	134.470	131.641	129.512	217.082	216.928
.25246E+09	135.771	134.920	132.159	130.081	215.747	215.594
.28402E+09	135.473	134.640	131.935	129.900	213.912	213.762
.31558E+09	135.183	134.364	131.705	129.706	212.342	212.194
.63115E+09	131.125	130.437	128.210	126.540	196.255	196.124
.94673E+09	126.071	125.481	123.572	122.146	182.119	182.001
.12623E+10	120.418	119.901	118.234	116.990	169.499	169.394
.15779E+10	115.604	115.149	113.688	112.598	158.778	158.683
.18935E+10	111.634	111.230	109.933	108.965	150.061	149.973
.22090E+10	108.294	107.931	106.769	105.902	142.790	142.708
.25246E+10	105.022	104.693	103.640	102.855	136.298	136.222
.28402E+10	102.533	102.231	101.267	100.546	131.236	131.165
.31558E+10	100.409	100.131	99.2468	98.5875	126.757	126.690
.63115E+10	89.1849	89.0190	88.4936	88.1070	104.955	104.911
.94673E+10	84.5385	84.4112	84.0095	83.7144	96.6298	96.5937
.12623E+11	81.8708	81.7656	81.4341	81.1913	91.8522	91.8212
.15779E+11	79.9168	79.8260	79.5406	79.3313	88.5246	88.4973
.18935E+11	78.0398	77.9603	77.7103	77.5276	85.5694	85.5454
.22090E+11	76.4566	76.3856	76.1630	76.0000	83.1726	83.1511
.25246E+11	75.0709	75.0072	74.8074	74.6616	81.0939	81.0742
.28402E+11	73.8667	73.8088	73.6278	73.4954	79.3330	79.3149
.31558E+11	72.8373	72.7842	72.6181	72.4970	77.8481	77.8312

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64647.660 TIME= 09:59:22
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 59 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 14 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 135 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 620 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 699 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 701 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 703 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 666 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 659 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 765 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 844 ITEM= TEMP COMP= NAME= h16i180

VARIABLE 18 IS AT NODE 846 ITEM= TEMP COMP= NAME= c16i180

VARIABLE 19 IS AT NODE 848 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 811 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 804 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 910 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 989 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 991 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 993 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 956 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 949 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4028 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3931 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4565 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2 NSOL	3544 TEMP	ts2i180	76.86	.3156E+11	215.8	.9467E+08
3 NSOL	104 TEMP	t02i180	76.86	.3156E+11	215.9	.9467E+08
4 NSOL	29 TEMP	s02i180	76.87	.3156E+11	215.9	.9467E+08
5 NSOL	55 TEMP	h02i180	77.77	.3156E+11	230.0	.6312E+08
6 NSOL	57 TEMP	c02i180	78.25	.3156E+11	237.4	.6312E+08
7 NSOL	59 TEMP	h02o180	78.39	.3156E+11	239.9	.6312E+08
8 NSOL	14 TEMP	s02o180	78.18	.3156E+11	237.4	.6312E+08
9 NSOL	135 TEMP	t02o180	78.18	.3156E+11	237.4	.6312E+08
10 NSOL	620 TEMP	s10i180	78.18	.3156E+11	237.5	.6312E+08
11 NSOL	699 TEMP	h10i180	78.54	.3156E+11	241.7	.6312E+08
12 NSOL	701 TEMP	c10i180	78.58	.3156E+11	241.3	.6312E+08
13 NSOL	703 TEMP	h10o180	78.33	.3156E+11	237.0	.6312E+08
14 NSOL	666 TEMP	s10o180	77.76	.3156E+11	228.0	.6312E+08
15 NSOL	659 TEMP	t10o180	77.76	.3156E+11	227.9	.6312E+08
16 NSOL	765 TEMP	s16i180	77.76	.3156E+11	227.9	.6312E+08
17 NSOL	844 TEMP	h16i180	77.80	.3156E+11	226.4	.6312E+08
18 NSOL	846 TEMP	c16i180	77.51	.3156E+11	220.2	.6312E+08
19 NSOL	848 TEMP	h16o180	76.95	.3156E+11	210.0	.9467E+08
20 NSOL	811 TEMP	s16o180	76.08	.3156E+11	195.0	.9467E+08
21 NSOL	804 TEMP	t16o180	76.08	.3156E+11	195.0	.9467E+08
22 NSOL	910 TEMP	s22i180	76.08	.3156E+11	194.9	.9467E+08
23 NSOL	989 TEMP	h22i180	75.99	.3156E+11	191.6	.1262E+09
24 NSOL	991 TEMP	c22i180	75.61	.3156E+11	184.1	.1262E+09
25 NSOL	993 TEMP	h22o180	74.95	.3156E+11	172.3	.1578E+09
26 NSOL	956 TEMP	s22o180	66.48	.1000E-05	153.5	.2525E+09
27 NSOL	949 TEMP	t22o180	66.37	.1000E-05	153.5	.2525E+09
28 NSOL	4028 TEMP	i22i180	29.31	.1000E-05	132.3	.2525E+09
29 NSOL	3931 TEMP	i22o180	28.35	.1000E-05	131.4	.2525E+09
30 NSOL	4565 TEMP	o22o180	26.14	.1000E-05	129.7	.2525E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:26 JUN 19, 1995 CP= 64651.390
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.061	139.072	139.178	158.715	168.730	172.061
.20000E-05	176.685	176.696	176.798	194.198	203.225	206.273
31.558	176.685	176.696	176.798	194.198	203.225	206.273
.31558E+07	199.846	199.856	199.955	215.973	224.260	227.030
.63116E+07	204.249	204.259	204.357	220.119	228.284	231.012
.94673E+07	206.730	206.740	206.837	222.412	230.486	233.184
.12623E+08	208.466	208.477	208.573	223.998	231.998	234.672
.15779E+08	209.781	209.792	209.888	225.186	233.123	235.776
.18935E+08	210.808	210.819	210.914	226.101	233.983	236.617
.22090E+08	211.645	211.655	211.750	226.837	234.669	237.285
.25246E+08	212.336	212.347	212.441	227.436	235.221	237.822
.28402E+08	212.911	212.922	213.016	227.924	235.667	238.253
.31558E+08	213.396	213.407	213.500	228.329	236.031	238.603
.63115E+08	215.692	215.702	215.792	230.011	237.404	239.869
.94673E+08	215.850	215.859	215.946	229.717	236.881	239.266
.12623E+09	215.214	215.223	215.308	228.717	235.695	238.015
.15779E+09	214.316	214.325	214.407	227.517	234.342	236.608
.18935E+09	212.951	212.960	213.041	225.858	232.531	234.744
.22090E+09	211.620	211.629	211.708	224.276	230.820	232.988
.25246E+09	210.344	210.353	210.430	222.766	229.189	231.315
.28402E+09	208.487	208.495	208.571	220.711	227.033	229.123
.31558E+09	206.897	206.905	206.980	218.956	225.193	227.254
.63115E+09	190.741	190.748	190.810	201.190	206.603	208.374
.94673E+09	176.621	176.627	176.680	185.784	190.540	192.088
.12623E+10	164.064	164.069	164.115	172.213	176.442	177.806
.15779E+10	153.549	153.553	153.593	160.811	164.577	165.779
.18935E+10	145.094	145.097	145.132	151.625	155.012	156.083
.22090E+10	138.098	138.101	138.132	144.004	147.070	148.035
.25246E+10	131.844	131.847	131.875	137.234	140.032	140.909
.28402E+10	127.008	127.011	127.036	131.979	134.561	135.367
.31558E+10	122.764	122.766	122.789	127.348	129.729	130.470
.63115E+10	102.214	102.216	102.229	105.022	106.481	106.927
.94673E+10	94.4411	94.4421	94.4525	96.6102	97.7376	98.0795
.12623E+11	90.0070	90.0079	90.0164	91.8042	92.7380	93.0197
.15779E+11	86.9095	86.9102	86.9176	88.4632	89.2703	89.5126
.18935E+11	84.1397	84.1404	84.1468	85.5008	86.2076	86.4193
.22090E+11	81.8823	81.8829	81.8886	83.0987	83.7302	83.9187
.25246E+11	79.9255	79.9260	79.9311	81.0180	81.5849	81.7537
.28402E+11	78.2640	78.2645	78.2691	79.2567	79.7718	79.9247
.31558E+11	76.8617	76.8622	76.8664	77.7726	78.2451	78.3850

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:26 JUN 19, 1995 CP= 64651.400
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP s02o180	135 TEMP t02o180	620 TEMP s10i180	699 TEMP h10i180	701 TEMP c10i180	703 TEMP h10o180
.10000E-05	168.702	168.701	168.718	175.450	175.913	170.949
.20000E-05	203.377	203.375	203.390	208.992	209.057	204.286
31.558	203.377	203.375	203.390	208.992	209.056	204.286
.31558E+07	224.334	224.331	224.345	229.221	229.013	224.341
.63116E+07	228.356	228.353	228.366	233.129	232.885	228.239
.94673E+07	230.555	230.553	230.566	235.251	234.986	230.366
.12623E+08	232.067	232.064	232.077	236.702	236.422	231.827
.15779E+08	233.190	233.187	233.200	237.776	237.485	232.912
.18935E+08	234.048	234.045	234.057	238.592	238.292	233.740
.22090E+08	234.731	234.728	234.741	239.239	238.932	234.400
.25246E+08	235.282	235.279	235.292	239.756	239.444	234.930

.28402E+08	235.726	235.723	235.736	240.169	239.853	235.357
.31558E+08	236.088	236.085	236.098	240.503	240.183	235.705
.63115E+08	237.445	237.442	237.454	241.661	241.327	236.996
.94673E+08	236.907	236.904	236.916	240.991	240.660	236.451
.12623E+09	235.708	235.705	235.716	239.692	239.370	235.266
.15779E+09	234.343	234.340	234.351	238.248	237.936	233.922
.18935E+09	232.522	232.520	232.530	236.352	236.053	232.131
.22090E+09	230.802	230.800	230.810	234.569	234.283	230.440
.25246E+09	229.163	229.160	229.171	232.871	232.597	228.828
.28402E+09	226.999	226.996	227.006	230.664	230.406	226.705
.31558E+09	225.152	225.150	225.159	228.782	228.537	224.892
.63115E+09	206.497	206.495	206.503	209.767	209.634	206.528
.94673E+09	190.402	190.400	190.408	193.365	193.309	190.621
.12623E+10	176.270	176.269	176.275	178.984	178.986	176.628
.15779E+10	164.374	164.373	164.379	166.857	166.899	164.821
.18935E+10	154.790	154.789	154.794	157.070	157.135	155.281
.22090E+10	146.849	146.848	146.853	148.942	149.019	147.351
.25246E+10	139.816	139.816	139.820	141.750	141.835	140.323
.28402E+10	134.351	134.350	134.354	136.151	136.241	134.852
.31558E+10	129.525	129.524	129.528	131.199	131.291	130.015
.63115E+10	106.323	106.323	106.325	107.394	107.477	106.710
.94673E+10	97.6051	97.6047	97.6064	98.4442	98.5152	97.9250
.12623E+11	92.6226	92.6223	92.6237	93.3233	93.3849	92.8967
.15779E+11	89.1666	89.1663	89.1675	89.7759	89.8311	89.4096
.18935E+11	86.1147	86.1145	86.1155	86.6507	86.7003	86.3317
.22090E+11	83.6448	83.6446	83.6456	84.1260	84.1716	83.8426
.25246E+11	81.5066	81.5064	81.5072	81.9403	81.9820	81.6869
.28402E+11	79.6991	79.6989	79.6997	80.0945	80.1332	79.8651
.31558E+11	78.1772	78.1770	78.1778	78.5409	78.5768	78.3311

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:26 JUN 19, 1995 CP= 64651.410
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	159.460	159.424	159.407	159.336	152.840	140.500
.20000E-05	193.763	193.726	193.707	192.800	186.227	174.493
31.558	193.763	193.726	193.707	192.799	186.227	174.493
.31558E+07	214.372	214.335	214.315	212.938	206.340	194.960
.63116E+07	218.382	218.345	218.324	216.885	210.306	199.020
.94673E+07	220.599	220.562	220.541	219.067	212.514	201.313
.12623E+08	222.134	222.096	222.076	220.578	214.051	202.923
.15779E+08	223.283	223.245	223.225	221.711	215.208	204.145
.18935E+08	224.168	224.131	224.111	222.585	216.107	205.103
.22090E+08	224.880	224.843	224.823	223.288	216.834	205.886
.25246E+08	225.460	225.423	225.402	223.862	217.431	206.535
.28402E+08	225.933	225.896	225.876	224.331	217.923	207.078
.31558E+08	226.325	226.288	226.268	224.720	218.335	207.538
.63115E+08	227.960	227.925	227.905	226.364	220.182	209.776
.94673E+08	227.681	227.647	227.627	226.119	220.113	210.020
.12623E+09	226.718	226.684	226.665	225.198	219.348	209.520
.15779E+09	225.560	225.527	225.509	224.081	218.366	208.764
.18935E+09	223.954	223.922	223.904	222.524	216.948	207.573
.22090E+09	222.421	222.390	222.373	221.035	215.581	206.401
.25246E+09	220.957	220.927	220.910	219.612	214.269	205.273
.28402E+09	218.964	218.935	218.918	217.665	212.430	203.599
.31558E+09	217.260	217.231	217.215	216.000	210.854	202.160
.63115E+09	199.937	199.913	199.901	199.023	194.715	187.350
.94673E+09	184.862	184.842	184.831	184.202	180.547	174.209
.12623E+10	171.516	171.499	171.491	171.058	167.914	162.377
.15779E+10	160.270	160.255	160.248	159.958	157.234	152.368

.18935E+10	151.188	151.175	151.169	150.972	148.570	144.241
.22090E+10	143.653	143.642	143.636	143.500	141.364	137.482
.25246E+10	136.952	136.942	136.937	136.849	134.929	131.414
.28402E+10	131.745	131.735	131.731	131.675	129.925	126.703
.31558E+10	127.150	127.141	127.137	127.107	125.510	122.553
.63115E+10	104.957	104.952	104.950	104.997	104.071	102.306
.94673E+10	96.5688	96.5651	96.5636	96.6156	95.9117	94.5584
.12623E+11	91.7716	91.7686	91.7674	91.8183	91.2406	90.1239
.15779E+11	88.4361	88.4335	88.4325	88.4816	87.9858	87.0232
.18935E+11	85.4786	85.4764	85.4755	85.5218	85.0900	84.2488
.22090E+11	83.0799	83.0780	83.0772	83.1217	82.7382	81.9882
.25246E+11	81.0017	80.9999	80.9992	81.0416	80.6988	80.0266
.28402E+11	79.2421	79.2406	79.2399	79.2803	78.9702	78.3603
.31558E+11	77.7592	77.7577	77.7572	77.7957	77.5120	76.9532

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:26 JUN 19, 1995 CP= 64651.420
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	120.866	120.805	120.770	118.134	108.943	93.0563
.20000E-05	156.394	156.333	156.296	153.142	144.273	129.452
31.558	156.394	156.333	156.296	153.142	144.273	129.452
.31558E+07	177.790	177.729	177.691	174.208	165.558	151.372
.63116E+07	182.042	181.981	181.943	178.424	169.837	155.811
.94673E+07	184.489	184.428	184.389	180.856	172.324	158.427
.12623E+08	186.227	186.166	186.128	182.589	174.107	160.317
.15779E+08	187.562	187.502	187.464	183.923	175.488	161.793
.18935E+08	188.624	188.564	188.525	184.987	176.595	162.986
.22090E+08	189.502	189.442	189.404	185.870	177.518	163.989
.25246E+08	190.241	190.181	190.143	186.614	178.302	164.848
.28402E+08	190.868	190.808	190.770	187.248	178.973	165.589
.31558E+08	191.408	191.349	191.311	187.796	179.557	166.241
.63115E+08	194.282	194.225	194.188	190.759	182.823	170.044
.94673E+08	195.019	194.964	194.928	191.591	183.903	171.545
.12623E+09	194.930	194.876	194.841	191.592	184.118	172.114
.15779E+09	194.517	194.464	194.431	191.262	183.969	172.263
.18935E+09	193.669	193.618	193.585	190.502	183.394	171.985
.22090E+09	192.790	192.740	192.708	189.701	182.753	171.600
.25246E+09	191.936	191.887	191.856	188.919	182.119	171.204
.28402E+09	190.505	190.457	190.426	187.562	180.899	170.196
.31558E+09	189.270	189.223	189.193	186.389	179.840	169.315
.63115E+09	176.400	176.361	176.337	174.093	168.615	159.757
.94673E+09	164.733	164.700	164.680	162.861	158.194	150.589
.12623E+10	154.044	154.016	153.999	152.496	148.444	141.807
.15779E+10	145.011	144.987	144.973	143.710	140.174	134.358
.18935E+10	137.684	137.664	137.651	136.569	133.442	128.279
.22090E+10	131.586	131.567	131.556	130.617	127.825	123.201
.25246E+10	126.061	126.045	126.035	125.211	122.694	118.511
.28402E+10	121.784	121.769	121.760	121.024	118.724	114.892
.31558E+10	118.032	118.018	118.010	117.351	115.248	111.735
.63115E+10	99.5810	99.5732	99.5687	99.2248	97.9888	95.9013
.94673E+10	92.4649	92.4590	92.4556	92.2046	91.2636	89.6684
.12623E+11	88.3931	88.3883	88.3855	88.1852	87.4117	86.0970
.15779E+11	85.5290	85.5249	85.5226	85.3541	84.6892	83.5569
.18935E+11	82.9414	82.9378	82.9358	82.7912	82.2110	81.2216
.22090E+11	80.8212	80.8181	80.8162	80.6901	80.1740	79.2924
.25246E+11	78.9794	78.9766	78.9750	78.8639	78.4021	77.6122
.28402E+11	77.4094	77.4068	77.4054	77.3063	76.8880	76.1716
.31558E+11	76.0811	76.0788	76.0775	75.9879	75.6051	74.9487

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:59:26 JUN 19, 1995 CP= 64651.440
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4819	66.3736	29.3067	28.3486	26.1409
.20000E-05	104.902	104.787	72.2476	71.1938	68.9625
31.558	104.902	104.787	72.2476	71.1938	68.9625
.31558E+07	128.049	127.932	98.1059	97.0030	94.7398
.63116E+07	132.769	132.653	103.458	102.354	100.099
.94673E+07	135.618	135.501	106.761	105.660	103.425
.12623E+08	137.703	137.586	109.212	108.114	105.897
.15779E+08	139.347	139.231	111.168	110.073	107.872
.18935E+08	140.695	140.579	112.789	111.698	109.511
.22090E+08	141.839	141.724	114.181	113.094	110.920
.25246E+08	142.831	142.716	115.400	114.316	112.155
.28402E+08	143.699	143.585	116.478	115.398	113.249
.31558E+08	144.471	144.357	117.446	116.371	114.233
.63115E+08	149.220	149.109	123.665	122.625	120.581
.94673E+08	151.452	151.345	126.956	125.948	123.977
.12623E+09	152.625	152.521	128.968	127.990	126.080
.15779E+09	153.279	153.178	130.305	129.352	127.494
.18935E+09	153.503	153.404	131.186	130.259	128.452
.22090E+09	153.544	153.448	131.783	130.877	129.115
.25246E+09	153.546	153.451	132.295	131.411	129.689
.28402E+09	152.888	152.796	132.067	131.202	129.517
.31558E+09	152.299	152.208	131.834	130.985	129.331
.63115E+09	145.472	145.397	128.285	127.588	126.217
.94673E+09	138.368	138.305	123.606	123.022	121.862
.12623E+10	131.169	131.116	118.239	117.741	116.740
.15779E+10	125.044	124.998	113.671	113.243	112.374
.18935E+10	120.019	119.979	109.900	109.527	108.761
.22090E+10	115.808	115.772	106.726	106.397	105.715
.25246E+10	111.825	111.794	103.591	103.297	102.683
.28402E+10	108.769	108.740	101.212	100.946	100.386
.31558E+10	106.124	106.098	99.1890	98.9473	98.4371
.63115E+10	92.5778	92.5629	88.4369	88.3012	88.0096
.94673E+10	87.1309	87.1198	83.9572	83.8561	83.6361
.12623E+11	84.0065	83.9975	81.3865	81.3042	81.1244
.15779E+11	81.7566	81.7489	79.4968	79.4267	79.2725
.18935E+11	79.6488	79.6421	77.6709	77.6100	77.4760
.22090E+11	77.8911	77.8851	76.1264	76.0728	75.9537
.25246E+11	76.3564	76.3511	74.7735	74.7256	74.6195
.28402E+11	75.0328	75.0280	73.5958	73.5528	73.4566
.31558E+11	73.9053	73.9010	72.5877	72.5484	72.4607

***** ROUTINE COMPLETED ***** CP = 64651.450

 End of batch input file

PURGE ALL SOLUTION AND POST DATA
 SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44j.db
 FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED=

29

NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

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*-----*
|               ANSYS RUN COMPLETED               |
|-----|
|               REV. 5.0 A               HP 9000/7XX               |
| CP TIME      (sec) =    64655.510    TIME = 09:59:30             |
| ELAPSED TIME (sec) =    67524.000    DATE  = 06/19/95             |
|-----|
*-----*
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WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****
 JOB NAME = ucf44h
 MEMORY REQUESTED (MB) = 64.0
 BATCH MODE REQUESTED
 start.ans FILE

***** ANSYS DYNAMIC MEMORY ALLOCATION *****
 WORK SPACE REQUESTED = 16777216 64.000 MB COMMAND LINE
 MINIMUM WORK SPACE REQUIRED = 4718592 18.000 MB
 MINIMUM WORK SPACE RECOMMENDED = 6702496 25.568 MB
 WORK SPACE OBTAINED = 16777214 64.000 MB
 BYTES PER WORD = 4

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 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
 ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
 ENTER HELP FOR GENERAL ANSYS HELP INFORMATION
 1 /COM, *****
 2 /COM, ANSYS REVISION 5.0A 6/16/1995
 3 /COM, 2-D Model of 125 ton burnup credit UCF-DC Thomas L. Lotz
 4 /COM, *****
 5 /COM, *
 6 /COM, * File name: ucf44h.inp *
 7 /COM, * 44 BWR UCF with Low T.L. Disposal Container *
 8 /COM, * Helium Fill Gas *
 9 /COM, *
 10 /COM, * Material Property file: props01.dat *
 11 /COM, *
 12 /COM, * SNF Conductivity file: pwr15e.parm (Check for Changes) *
 13 /COM, * GE-7 8x8 SNF BWR Assembly (Assumed Conservative) *
 14 /COM, *
 15 /COM, * SNF Heat Loads file: bwr1049.dat *
 16 /COM, * SNF Type: 10 years old, 49000 MWD/MTU *
 17 /COM, *
 18 /COM, * Surface Temp. file: c21h5a.parm *


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19 /COM, *      25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
20 /COM, *      5.0 m Diameter Drift with Concrete Invert *
21 /COM, *      Drift spacing = 90.0 m *
22 /COM, *      WP c/c spacing = 16.165 m *
23 /COM, * *
24 /COM, *****
25 /COM, Increase the number of database pages from 16 (256) to 32 Mb
26 /CONFIG,nvpag,512,
27 /COM, Work space must also be increased (-m 64)
28 /COM, *****
29 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
30 /UNITS,SI,
31 /COM, *****
32 /COM, Read in average effective conductivities from SNF model
33 PARRES,CHANGE,pwr15e,param,
34 /COM, Read in surface temps. from repository model
35 PARRES,CHANGE,c21h5a,param,
36 /COM, *****
37 /COM,
38 /COM, Define Required Constants:
39 PI=3.141592654
40 /COM,
41 /COM, Define UCF/waste package parameters
42 /COM, (UCF dimensions converted from inches/cm/mm to meters were requi
43 /COM, MIRAD = inner radius of UCF He Backfill shell (m) (NOT
44 /COM, MWALL = UCF He Backfill shell thickness (m) (NOT
45 /COM, DCRAD = disposal container outer radius (m)
46 /COM, OWALL = outer barrier thickness (m)
47 /COM, IWALL = inner barrier thickness (m)
48 /COM, DCIRD = disposal container inner radius (m)
49 /COM,
50 /COM, GCORL = corner guide long side width (m)
51 /COM, GCORS = corner guide short side width (m)
52 /COM, GWALL = basket guide thickness (m)
53 /COM, GLEN1 = side guide 1/3 width (m) (NOT USED)
54 /COM, GLENT = side guide total width (m) (NOT USED)
55 /COM,
56 /COM, HCELL = 1/2 of basket cell opening (m)
57 /COM, SWALL = stainless tube thickness (m)
58 /COM, TWALL = Aluminum thermal shunt thickness (m)
59 /COM, TWALL = Aluminum thermal shunt thickness (m)
60 /COM, THWLL = 1/2 Aluminum thermal shunt thickness (m)
61 /COM,
62 /COM, ACTVL = active fuel length
63 /COM, PEAKF = assembly heat axial peaking factor
64 /COM,
65 /COM, MIRAD=1363.6/1000.0/2.0
66 /COM, MWALL=1.0000*2.54/100.0
67 DCRAD=1.5260/2.0
68 OWALL=0.0500
69 IWALL=0.0200
70 DCIRD=DCRAD-OWALL-IWALL
71 /COM,
72 GCORL=320.0/1000.0
73 GCORS=181.6/1000.0
74 GWALL=9.5/1000.0
75 /COM, GLEN1=9.6170*2.54/100.0
76 /COM, GLENT=28.866*2.54/100.0
77 /COM,
78 HCELL=153.0/1000.0/2.0
79 SWALL=3.5/1000.0
80 TWALL=20.0/1000.0
81 THWLL=TWALL/2.0
82 /COM,
83 ACTVL=150.0*2.54/100.0
84 PEAKF=1.40
85 /COM, Define calculated parameters
86 /COM, ASSY = assembly heat production (W) f(yrs)
87 /COM, FUEL = volumetric heat production (W/m3) f(yrs)
88 /COM, FVOLU = assy_volume=cell_width^2*active_length

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89 /COM,
90 /COM,          PITCH = basket cell outer width (m)
91 /COM,          QCELL = 1/4 of basket cell opening (m)
92 /COM,          SCELL = 1/2 of basket cell opening+SS wall(m)
93 /COM,          ACELL = 1/2 of basket cell opening+SS+AL (m)  (NOT USED)
94 /COM,
95 /COM,          GX## = x coord. of basket guide or thermal shunt/shell c
96 /COM,          GX## = y coord. of basket guide or thermal shunt/shell c
97 /COM,
98 /COM,          MI45 = x coord. MIRAD at 45 deg.                (NOT USED)
99 /COM,          MO45 = x coord. MIRAD+MWALL at 45 deg.          (NOT USED)
100 /COM,          DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.
101 /COM,          DM45 = x coord. DCRAD-OWALL at 45 deg.
102 /COM,          DO45 = x coord. DCRAD at 45 deg.
103 *SET,ASSY,
104 *DIM,ASSY, TABLE,101,1,
105 *DIM,FUEL, TABLE,101,1
106 FVOLL=4*HCELL*HCELL*ACTVL
107 /COM,
108 PITCH=(HCELL+SWALL)*2.0
109 QCELL=HCELL/2.0
110 SCELL=HCELL+SWALL
111 /COM,          ACELL=HCELL+SWALL+AWALL
112 /COM,
113 GX22=THWLL
114 GY22=SQRT(DCIRD*DCIRD-GX22*GX22)
115 GX23=THWLL+PITCH
116 GY23=SQRT(DCIRD*DCIRD-GX23*GX23)
117 GX24=THWLL+PITCH+GWALL
118 GY24=SQRT(DCIRD*DCIRD-GX24*GX24)
119 GY25=THWLL+(3.0*PITCH)+GWALL
120 GX25=SQRT(DCIRD*DCIRD-GY25*GY25)
121 /COM,
122 /COM,          MI45=MIRAD/SQRT(2.0)
123 /COM,          MO45=(MIRAD+MWALL)/SQRT(2.0)
124 DI45=DCIRD/SQRT(2.0)
125 DM45=(DCRAD-OWALL)/SQRT(2.0)
126 DO45=DCRAD/SQRT(2.0)
127 /COM,
128 /COM,          Define Transient Time parameters based upon the following:
129 /COM,          Note: 1 year = 3.15576e7 seconds
130 /COM,          TM_START = start time (sec)
131 /COM,          TMI* = time increment for solution (sec)
132 /COM,          TME* = start and stop for time do-loops (sec)
133 /COM,          TMTMAX = time of maximum cladding temperature
134 /COM,
135 TM_START=(1.0E-6)*(3.15576E7)
136 TMI0=0.1*3.15576E7
137 TMI1=1.0*3.15576E7
138 TMI10=10.0*3.15576E7
139 TMI100=100.0*3.15576E7
140 TMI1000=1000.0*3.15576E7
141 TME0=0.9*3.15576E7+TM_START
142 TME1=TMI1+TM_START
143 TME9=9.0*3.15576E7+TM_START
144 TME10=TMI10+TM_START
145 TME50=50.0*3.15576E7+TM_START
146 TME90=90.0*3.15576E7+TM_START
147 TME100=TMI100+TM_START
148 TME1000=TMI1000+TM_START
149 /COM,
150 /COM,          *****
151 /COM,          Define different element types
152 /PREP7
153 ETYPE
154 ET, 1,55,
155 ET, 2,70,
156 ET, 7,32,
157 ET, 16,57,
158 ET, 17,32,

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159 ET, 18,50,1,
160 ET, 19,31,
161 ET, 27,32,
162 /COM, *****
163 /COM, File props01.dat describes material properties
164 /COM, and thier reference numbers
165 MPREAD,props01,dat,
166 /COM, Read in single assembly heat loads
167 /COM, Calculate the volumetric heat generation
168 /COM, (Assembly time is in years, FUEL is in seconds)
169 /INPUT,bwr1049,dat
170 *VFACT,3.15576E7,
171 *MFUN,FUEL(1,0),COPY,ASSY(1,0),
172 *VFACT,(PEAKF/FVOLU),
173 *VFUN,FUEL(1),COPY,ASSY(1),
174 FUEL(0,1)=1.0
175 /COM, *****
176 /COM, Define new material 14 for SNF effective conductivity
177 /COM, Density: DENS (kg/m^3)
178 /COM, Conductivity: KXX (W/m/K)
179 /COM, Specific Heat: C (J/kg/K)
180 MPTMP
181 MPTMP, 1, .00000E+00,
182 MPDATA,DENS,14, 1, .396004E+04,
183 MPDATA, C,14, 1, .27400E+03,
184 /COM, Store average effective conductivities
185 IINC=1
186 TBSKT=25.0
187 MPTMP
188 MPTMP,IINC,TBSKT,
189 IINC=IINC+1
190 *DO,TBSKT,50.0,400.0,50.0,
191 MPTMP,IINC,TBSKT,
192 IINC=IINC+1
193 *ENDDO
194 IINC=1
195 TBSKT=25.0
196 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
197 IINC=IINC+1
198 *DO,TBSKT,50.0,400.0,50.0,
199 MPDATA,KXX,14,IINC,KEFFAV(TBSKT),
200 IINC=IINC+1
201 *ENDDO
202 /COM, *****
203 /COM, Define new material 15 for low thermal loading
204 /COM, outer barrier of 70/30 Copper Nickel (C71500)
205 /COM, Density: DENS (kg/m^3)
206 /COM, Conductivity: KXX (W/m/K)
207 /COM, Specific Heat: C (J/kg/K)
208 MPTMP
209 MPTMP, 1, .00000E+00,
210 /COM, Density (lb/in^3 converted to kg/m^3)
211 MPDATA,DENS,15, 1,(0.323*2.768E+04),
212 /COM, Specific Heat (Btu/lb/F converted to J/kg/K)
213 MPDATA, C,15, 1,(0.09/2.3886E-04),
214 /COM, Conductivity (Btu/hr/ft/F converted to W/m/K)
215 MPTMP
216 MPTMP, 1, (5.0/9.0*(68.0-32.0)), (5.0/9.0*(212.0-32.0)),
217 MPTMP, 3, (5.0/9.0*(392.0-32.0)), (5.0/9.0*(572.0-32.0)),
218 MPTMP, 5, (5.0/9.0*(752.0-32.0)), (5.0/9.0*(932.0-32.0)),
219 MPTMP, 7, (5.0/9.0*(1112.0-32.0)), (5.0/9.0*(1292.0-32.0)),
220 MPDATA, KXX,15, 1, (17.0*1.7307), (16.9*1.7307),
221 MPDATA, KXX,15, 3, (19.7*1.7307), (22.3*1.7307),
222 MPDATA, KXX,15, 5, (24.9*1.7307), (27.8*1.7307),
223 MPDATA, KXX,15, 7, (30.7*1.7307), (33.6*1.7307),
224 /COM, *****
225 /COM, Construct geometry for Disposal Container
226 /COM,
227 /COM, Define center and axis keypoints for waste package
228 /COM, Also, create placeholder keypoints and lines

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229 /COM,          (K's 1,2,3,4,5,6,7,8)
230 /COM,          (L's 1,2,3,4)
231 K,1,0.0,0.0,0.0,
232 K,2,0.0,0.0,1.0,
233 K,3,0.0,0.0,1.3,
234 K,4,0.0,0.0,1.4,
235 K,5,0.0,0.0,1.5,
236 K,6,0.0,0.0,1.6,
237 K,7,0.0,0.0,1.7,
238 K,8,0.0,0.0,1.8,
239 L,3,4,
240 L,4,5,
241 L,5,6,
242 L,6,7,
243 /COM,          Define disposal container outer radius and material interface
244 /COM,          (K's 9,10,11,12,13,14)
245 /COM,          (L's 5,6,7,8,9,10,11)
246 /COM,          (A's 1,2)
247 K, 9,          0.0,          (0.0-DCRAD),0.0,
248 K,10,          DCRAD,          0.0,0.0,
249 K,11,          0.0,          DCRAD,0.0,
250 K,12,          0.0,          (OWALL-DCRAD),0.0,
251 K,13,          (DCRAD-OWALL), 0.0,0.0,
252 K,14,          0.0,          (DCRAD-OWALL),0.0,
253 L,10,13,
254 LARC,10, 9,1,          DCRAD,
255 LARC,11,10,1,          DCRAD,
256 LARC,13,12,1,          (DCRAD-OWALL),
257 LARC,14,13,1,          (DCRAD-OWALL),
258 L,11,14,
259 L, 9,12,
260 AL, 5, 6,11, 8,
261 AL,10, 7, 5, 9,
262 /COM,          *****
263 /COM,          Define UCF shell inner edge and area
264 /COM,          (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
265 /COM,          ( 31,32,33,34,35)
266 /COM,          (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
267 /COM,          ( 28,29,30,31,32,33,34)
268 /COM,          (A's 3,4)
269 K,15, 0.0,          DCIRD,0.0,
270 K,16, GX22,          GY22,0.0,
271 K,17, GX23,          GY23,0.0,
272 K,18, GX24,          GY24,0.0,
273 K,19, GX25,          GY25,0.0,
274 K,20, DI45,          DI45,0.0,
275 K,21, GY25,          GX25,0.0,
276 K,22, GY24,          GX24,0.0,
277 K,23, GY23,          GX23,0.0,
278 K,24, GY22,          GX22,0.0,
279 K,25,DCIRD,          0.0,0.0,
280 K,26, GY22, (0.0-GX22),0.0,
281 K,27, GY23, (0.0-GX23),0.0,
282 K,28, GY24, (0.0-GX24),0.0,
283 K,29, GY25, (0.0-GX25),0.0,
284 K,30, DI45, (0.0-DI45),0.0,
285 K,31, GX25, (0.0-GY25),0.0,
286 K,32, GX24, (0.0-GY24),0.0,
287 K,33, GX23, (0.0-GY23),0.0,
288 K,34, GX22, (0.0-GY22),0.0,
289 K,35, 0.0,(0.0-DCIRD),0.0,
290 L,14,15,
291 LARC,16,15,1,DCIRD,
292 LARC,17,16,1,DCIRD,
293 LARC,18,17,1,DCIRD,
294 LARC,19,18,1,DCIRD,
295 LARC,20,19,1,DCIRD,
296 LARC,21,20,1,DCIRD,
297 LARC,22,21,1,DCIRD,
298 LARC,23,22,1,DCIRD,

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299 LARC,24,23,1,DCIRD,
300 LARC,25,24,1,DCIRD,
301 LARC,26,25,1,DCIRD,
302 LARC,27,26,1,DCIRD,
303 LARC,28,27,1,DCIRD,
304 LARC,29,28,1,DCIRD,
305 LARC,30,29,1,DCIRD,
306 LARC,31,30,1,DCIRD,
307 LARC,32,31,1,DCIRD,
308 LARC,33,32,1,DCIRD,
309 LARC,34,33,1,DCIRD,
310 LARC,35,34,1,DCIRD,
311 L,12,35,
312 L,25,13,
313 LSEL,S,LINE,,12,22,
314 LSEL,A,LINE,,9,
315 LSEL,A,LINE,,34,
316 AL,ALL,
317 LSEL,S,LINE,,23,33,
318 LSEL,A,LINE,,8,
319 LSEL,A,LINE,,34,
320 AL,ALL,
321 LSEL,ALL,
322 /COM, *****
323 /COM, Define thermal shunts
324 /COM, (K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
325 /COM, ( 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
326 /COM, (L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
327 /COM, ( 50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
328 /COM, ( 67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
329 /COM, ( 84,85,86,87,88,89,90,91,92)
330 /COM, (A's 5 - 26)
331 /COM,
332 /COM, horizontal thermal shunt
333 K,36, 0.0, (0.0-THWLL),0.0,
334 K,37, 0.0, THWLL,0.0,
335 K,38, THWLL, (0.0-THWLL),0.0,
336 K,39, THWLL, 0.0,0.0,
337 K,40, THWLL, THWLL,0.0,
338 K,41, (THWLL+1.0*PITCH), (0.0-THWLL),0.0,
339 K,42, (THWLL+1.0*PITCH), 0.0,0.0,
340 K,43, (THWLL+1.0*PITCH), THWLL,0.0,
341 K,44, (THWLL+2.0*PITCH), (0.0-THWLL),0.0,
342 K,45, (THWLL+2.0*PITCH), 0.0,0.0,
343 K,46, (THWLL+2.0*PITCH), THWLL,0.0,
344 K,47, (THWLL+3.0*PITCH), (0.0-THWLL),0.0,
345 K,48, (THWLL+3.0*PITCH), 0.0,0.0,
346 K,49, (THWLL+3.0*PITCH), THWLL,0.0,
347 K,50, (THWLL+4.0*PITCH), (0.0-THWLL),0.0,
348 K,51, (THWLL+4.0*PITCH), 0.0,0.0,
349 K,52, (THWLL+4.0*PITCH), THWLL,0.0,
350 /COM, vertical thermal shunt
351 K,53, 0.0, (THWLL+4.0*PITCH),0.0,
352 K,54, THWLL, (THWLL+4.0*PITCH),0.0,
353 K,55, 0.0, (THWLL+3.0*PITCH),0.0,
354 K,56, THWLL, (THWLL+3.0*PITCH),0.0,
355 K,57, 0.0, (THWLL+2.0*PITCH),0.0,
356 K,58, THWLL, (THWLL+2.0*PITCH),0.0,
357 K,59, 0.0, (THWLL+1.0*PITCH),0.0,
358 K,60, THWLL, (THWLL+1.0*PITCH),0.0,
359 K,61, 0.0, (0.0-THWLL-1.0*PITCH),0.0,
360 K,62, THWLL, (0.0-THWLL-1.0*PITCH),0.0,
361 K,63, 0.0, (0.0-THWLL-2.0*PITCH),0.0,
362 K,64, THWLL, (0.0-THWLL-2.0*PITCH),0.0,
363 K,65, 0.0, (0.0-THWLL-3.0*PITCH),0.0,
364 K,66, THWLL, (0.0-THWLL-3.0*PITCH),0.0,
365 K,67, 0.0, (0.0-THWLL-4.0*PITCH),0.0,
366 K,68, THWLL, (0.0-THWLL-4.0*PITCH),0.0,
367 /COM, Lines; shunt widths; horizontal then vertical: (35-57)
368 L,36, 1,

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369 L, 1,37,
370 L,38,39,
371 L,39,40,
372 L,41,42,
373 L,42,43,
374 L,44,45,
375 L,45,46,
376 L,47,48,
377 L,48,49,
378 L,50,51,
379 L,51,52,
380 L,53,54,
381 L,55,56,
382 L,57,58,
383 L,59,60,
384 L,37,40,
385 L, 1,39,
386 L,36,38,
387 L,61,62,
388 L,63,64,
389 L,65,66,
390 L,67,68,
391 /COM, Lines; shunt edges, horizontal then vertical: (58-92)
392 L,38,41,
393 L,39,42,
394 L,40,43,
395 L,41,44,
396 L,42,45,
397 L,43,46,
398 L,44,47,
399 L,45,48,
400 L,46,49,
401 L,47,50,
402 L,48,51,
403 L,49,52,
404 L,26,50,
405 L,25,51,
406 L,52,24,
407 L,15,53,
408 L,16,54,
409 L,53,55,
410 L,54,56,
411 L,55,57,
412 L,56,58,
413 L,57,59,
414 L,58,60,
415 L,59,37,
416 L,60,40,
417 L,36,61,
418 L,38,62,
419 L,61,63,
420 L,62,64,
421 L,63,65,
422 L,64,66,
423 L,65,67,
424 L,66,68,
425 L,67,35,
426 L,68,34,
427 /COM, define areas for thermal shunts
428 AL,35,53,37,52,
429 AL,36,52,38,51,
430 AL,37,58,39,59,
431 AL,38,59,40,60,
432 AL,39,61,41,62,
433 AL,40,62,42,63,
434 AL,41,64,43,65,
435 AL,42,65,44,66,
436 AL,43,67,45,68,
437 AL,44,68,46,69,
438 AL,45,70,23,71,

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439 AL,46,71,22,72,
440 AL,73,47,74,13,
441 AL,75,48,76,47,
442 AL,77,49,78,48,
443 AL,79,50,80,49,
444 AL,81,51,82,50,
445 AL,83,54,84,53,
446 AL,85,55,86,54,
447 AL,87,56,88,55,
448 AL,89,57,90,56,
449 AL,91,32,92,57,
450 /COM, *****
451 /COM,      Define tube guides
452 /COM,      (K's 69 - 92)
453 /COM,      (L's 93 - 136)
454 /COM,      (A's 27 - 46)
455 /COM,
456 /COM,      top guide
457 K,69,      (THWLL+1.0*PITCH),      (THWLL+4.0*PITCH),0.0,
458 K,70,(THWLL+1.0*PITCH+GWALL),      (THWLL+4.0*PITCH),0.0,
459 K,71,      (THWLL+1.0*PITCH),      (THWLL+3.0*PITCH),0.0,
460 K,72,(THWLL+1.0*PITCH+GWALL),      (THWLL+3.0*PITCH+GWALL),0.0,
461 K,73,      (THWLL+2.0*PITCH),      (THWLL+3.0*PITCH),0.0,
462 K,74,      (THWLL+2.0*PITCH),      (THWLL+3.0*PITCH+GWALL),0.0,
463 K,75,      (THWLL+3.0*PITCH),      (THWLL+2.0*PITCH),0.0,
464 K,76,(THWLL+3.0*PITCH+GWALL),      (THWLL+2.0*PITCH),0.0,
465 K,77,      (THWLL+3.0*PITCH),      (THWLL+1.0*PITCH),0.0,
466 K,78,(THWLL+3.0*PITCH+GWALL),      (THWLL+1.0*PITCH+GWALL),0.0,
467 K,79,      (THWLL+4.0*PITCH),      (THWLL+1.0*PITCH),0.0,
468 K,80,      (THWLL+4.0*PITCH),      (THWLL+1.0*PITCH+GWALL),0.0,
469 /COM,      bottom guide
470 K,81,      (THWLL+4.0*PITCH),      (-1.0*PITCH-THWLL),0.0,
471 K,82,      (THWLL+4.0*PITCH),      (-1.0*PITCH-GWALL-THWLL),0.0,
472 K,83,      (THWLL+3.0*PITCH),      (-1.0*PITCH-THWLL),0.0,
473 K,84,(THWLL+3.0*PITCH+GWALL),      (-1.0*PITCH-GWALL-THWLL),0.0,
474 K,85,      (THWLL+3.0*PITCH),      (-2.0*PITCH-THWLL),0.0,
475 K,86,(THWLL+3.0*PITCH+GWALL),      (-2.0*PITCH-THWLL),0.0,
476 K,87,      (THWLL+2.0*PITCH),      (-3.0*PITCH-THWLL),0.0,
477 K,88,      (THWLL+2.0*PITCH),      (-3.0*PITCH-GWALL-THWLL),0.0,
478 K,89,      (THWLL+1.0*PITCH),      (-3.0*PITCH-THWLL),0.0,
479 K,90,(THWLL+1.0*PITCH+GWALL),      (-3.0*PITCH-GWALL-THWLL),0.0,
480 K,91,      (THWLL+1.0*PITCH),      (-4.0*PITCH-THWLL),0.0,
481 K,92,(THWLL+1.0*PITCH+GWALL),      (-4.0*PITCH-THWLL),0.0,
482 /COM,
483 /COM,      top guide
484 L,69,17,
485 L,18,70,
486 L,71,69,
487 L,70,72,
488 L,73,71,
489 L,72,74,
490 L,20,73,
491 L,74,19,
492 L,75,20,
493 L,21,76,
494 L,77,75,
495 L,76,78,
496 L,79,77,
497 L,78,80,
498 L,23,79,
499 L,80,22,
500 /COM,      bottom guide
501 L,81,27,
502 L,28,82,
503 L,83,81,
504 L,82,84,
505 L,85,83,
506 L,84,86,
507 L,30,85,
508 L,86,29,

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509 L,87,30,
510 L,31,88,
511 L,89,87,
512 L,88,90,
513 L,91,89,
514 L,90,92,
515 L,33,91,
516 L,92,32,
517 /COM,          Guide thickness lines
518 L,69,70,
519 L,71,72,
520 L,73,74,
521 L,75,76,
522 L,77,78,
523 L,79,80,
524 L,82,81,
525 L,84,83,
526 L,86,85,
527 L,88,87,
528 L,90,89,
529 L,92,91,
530 /COM,          Guide steel
531 AL, 93,125, 94, 15,
532 AL, 95,126, 96,125,
533 AL, 97,127, 98,126,
534 AL, 99, 17,100,127,
535 AL,101,128,102, 18,
536 AL,103,129,104,128,
537 AL,105,130,106,129,
538 AL,107, 20,108,130,
539 AL,109,131,110, 25,
540 AL,111,132,112,131,
541 AL,113,133,114,132,
542 AL,115, 27,116,133,
543 AL,117,134,118, 28,
544 AL,119,135,120,134,
545 AL,121,136,122,135,
546 AL,123, 30,124,136,
547 /COM,          Guide gaps
548 AL, 16, 94, 96, 98,100,
549 AL, 19,102,104,106,108,
550 AL, 26,110,112,114,116,
551 AL, 29,118,120,122,124,
552 /COM,          *****
553 /COM,          Define shell gaps at the exterior of the tube array
554 /COM,          (L's 137 - 140)
555 /COM,          (A's 47 - 50)
556 /COM,
557 L, 54, 69,
558 L, 79, 52,
559 L, 50, 81,
560 L, 91, 68,
561 /COM,
562 AL, 14, 74,137, 93,
563 AL, 21,107,138, 72,
564 AL, 24, 70,139,109,
565 AL, 31,123,140, 92,
566 /COM,          *****
567 /COM,          Define center full-tube
568 /COM,          (K's 93 - 100)
569 /COM,          (L's 141 - 152)
570 /COM,          (A's 51 - 56)
571 K, 93,          THWLL,          THWLL,0.0,
572 K, 94,          THWLL,          (THWLL+PITCH),0.0,
573 K, 95,          (THWLL+PITCH), (THWLL+PITCH),0.0,
574 K, 96,          (THWLL+PITCH),          THWLL,0.0,
575 K, 97,          (THWLL+SWALL), (THWLL+SWALL),0.0,
576 K, 98,          (THWLL+SWALL),(PITCH+THWLL-SWALL),0.0,
577 K, 99,(PITCH+THWLL-SWALL),(PITCH+THWLL-SWALL),0.0,
578 K,100,(PITCH+THWLL-SWALL), (THWLL+SWALL),0.0,

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579 L, 93, 97,
580 L, 94, 98,
581 L, 96, 100,
582 L, 95, 99,
583 L, 96, 93,
584 L, 100, 97,
585 L, 98, 99,
586 L, 94, 95,
587 L, 93, 94,
588 L, 97, 98,
589 L, 99, 100,
590 L, 95, 96,
591 AL, 149, 141, 150, 142,
592 AL, 145, 143, 146, 141,
593 AL, 152, 144, 151, 143,
594 AL, 148, 142, 147, 144,
595 AL, 150, 146, 151, 147,
596 /COM, *****
597 /COM,          Set element shapes and sizes for tubes
598 /COM,          8x8 mesh in fuel with 2
599 /COM,          divisions per tube layer
600 ESHAPE, 2,
601 ESIZE, 1,
602 LSEL, S, LINE, 145, 152, 1,
603 LESIZE, ALL, 8,
604 LSEL, S, LINE, 141, 144, 1,
605 LESIZE, ALL, 2,
606 LSEL, ALL,
607 /COM,
608 /COM,          Mesh areas
609 /COM,          first fuel, then stainless tubes
610 MAT, 14,
611 TYPE, 1,
612 AMESH, 55,
613 MAT, 1,
614 TYPE, 1,
615 AMESH, 51, 54, 1,
616 /COM, *****
617 /COM,          Copy tube mesh
618 /COM,
619 /COM,          center full tube side, above, and below
620 /COM,          (A's 56 - 60 = Side 1)
621 AGEN, 2, 51, 55, 1, (1.0*PITCH), 0.0, 0.0, 0.0,
622 /COM,          (A's 61 - 65 = Side 2)
623 AGEN, 2, 51, 55, 1, (2.0*PITCH), 0.0, 0.0, 0.0,
624 /COM,          (A's 66 - 70 = Side 3)
625 AGEN, 2, 51, 55, 1, (3.0*PITCH), 0.0, 0.0, 0.0,
626 /COM,
627 /COM,          (A's 71 - 75 = up 1)
628 AGEN, 2, 51, 55, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
629 /COM,          (A's 76 - 80 = up 2)
630 AGEN, 2, 51, 55, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
631 /COM,          (A's 81 - 85 = up 3)
632 AGEN, 2, 51, 55, 1, 0.0, (3.0*PITCH), 0.0, 0.0,
633 /COM,
634 /COM,          (A's 86 - 90 = down 1)
635 AGEN, 2, 51, 55, 1, 0.0, (-1.0*PITCH-TWALL), 0.0, 0.0,
636 /COM,          (A's 91 - 95 = down 2)
637 AGEN, 2, 51, 55, 1, 0.0, (-2.0*PITCH-TWALL), 0.0, 0.0,
638 /COM,          (A's 96 - 100 = down 3)
639 AGEN, 2, 51, 55, 1, 0.0, (-3.0*PITCH-TWALL), 0.0, 0.0,
640 /COM,          (A's 101 - 105 = down 4)
641 AGEN, 2, 51, 55, 1, 0.0, (-4.0*PITCH-TWALL), 0.0, 0.0,
642 /COM,
643 /COM,          (A's 106 - 110 = up 1)
644 AGEN, 2, 56, 60, 1, 0.0, (1.0*PITCH), 0.0, 0.0,
645 /COM,          (A's 111 - 115 = up 2)
646 AGEN, 2, 56, 60, 1, 0.0, (2.0*PITCH), 0.0, 0.0,
647 /COM,
648 /COM,          (A's 116 - 120 = down 1)

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649 AGEN,2,56,60,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
650 /COM, (A's 121 - 125 = down 2)
651 AGEN,2,56,60,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
652 /COM, (A's 126 - 130 = down 3)
653 AGEN,2,56,60,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
654 /COM,
655 /COM, (A's 131 - 135 = up 1)
656 AGEN,2,61,65,1,0.0,(1.0*PITCH),0.0,0,0,
657 /COM, (A's 136 - 140 = up 2)
658 AGEN,2,61,65,1,0.0,(2.0*PITCH),0.0,0,0,
659 /COM,
660 /COM, (A's 141 - 145 = down 1)
661 AGEN,2,61,65,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
662 /COM, (A's 146 - 150 = down 2)
663 AGEN,2,61,65,1,0.0,(-2.0*PITCH-TWALL),0.0,0,0,
664 /COM, (A's 151 - 155 = down 3)
665 AGEN,2,61,65,1,0.0,(-3.0*PITCH-TWALL),0.0,0,0,
666 /COM,
667 /COM, (A's 156 - 160 = down 1)
668 AGEN,2,66,70,1,0.0,(-1.0*PITCH-TWALL),0.0,0,0,
669 /COM,
670 /COM, *****
671 /COM, Create mesh in tube guides, thermal shunts
672 /COM, Set mesh size for gaps.....
673 ESIZE,,2,
674 LSEL,S,LINE,, 35, 57,1,
675 LSEL,A,LINE,,125,136,1,
676 LSEL,A,LINE,, 13, 15,2,
677 LSEL,A,LINE,, 17, 18,1,
678 LSEL,A,LINE,, 20, 22,2,
679 LSEL,A,LINE,, 23, 25,2,
680 LSEL,A,LINE,, 27, 28,1,
681 LSEL,A,LINE,, 30, 32,2,
682 LESIZE,ALL,,, 2,
683 LSEL,S,LINE,, 70, 74,1,
684 LSEL,A,LINE,, 91, 94,1,
685 LSEL,A,LINE,,107,110,1,
686 LSEL,A,LINE,,123,124,1,
687 LESIZE,ALL,,, 3,
688 LSEL,S,LINE,, 14, 21,7,
689 LSEL,A,LINE,, 24, 31,7,
690 LSEL,A,LINE,, 58, 69,1,
691 LSEL,A,LINE,, 75, 90,1,
692 LSEL,A,LINE,, 95,106,1,
693 LSEL,A,LINE,,111,122,1,
694 LSEL,A,LINE,,137,140,1,
695 LESIZE,ALL,,, 8,
696 LSEL,S,LINE,, 16, 19,3,
697 LSEL,A,LINE,, 26, 29,3,
698 LESIZE,ALL,,, 16,
699 /COM, MESH CORNER GUIDES
700 ESHAPE,2,
701 ESIZE,,1,
702 MAT,2,
703 TYPE,1,
704 AMESH,27,42,1,
705 /COM, MESH THERMAL SHUNTS
706 ESHAPE,2,
707 ESIZE,,1,
708 MAT,13,
709 TYPE,1,
710 AMESH, 5,26,1,
711 NUMMRG,NODE,
712 NUMMRG,KP,
713 /COM, *****
714 /COM, Create mesh in UCF inner shell
715 /COM, (L's 105,108 ????)
716 LSEL,S,LINE,,13,22,1,
717 LCCAT,ALL,
718 LSEL,S,LINE,,23,32,1,

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719 LCCAT,ALL,
720 LSEL,ALL,
721 LESIZE,8,,,60,
722 LESIZE,9,,,60,
723 LESIZE,12,,,3,
724 LESIZE,33,,,3,
725 MAT,2,
726 TYPE,1,
727 AMESH,3,4,1
728 /COM,          Delete concatenatd lines
729 /COM,          (L's freed up 105,108 ????)
730 /COM, LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES
731 /COM,
732 LSEL,S,LINE,,6,7,1,
733 LESIZE,ALL,,,60,
734 LSEL,ALL,
735 LESIZE,5,,,3,
736 LESIZE,10,,,3,
737 LESIZE,11,,,3,
738 MAT,15,
739 TYPE,1,
740 AMESH,1,2,1,
741 NUMMRG,NODE,
742 NUMMRG,KP,
743 /COM, *****
744 /COM,          Create mesh in empty basket spaces
745 ESIZE,0.1,
746 ESHAPE,0,
747 MAT,7,
748 TYPE,1,
749 AMESH,43,50,1,
750 NUMMRG,NODE,
751 NUMMRG,KP,
752 /COM, *****
753 /COM,          Create radiation surface elements
754 /COM,          Basket spaces
755 MAT,2,
756 TYPE,17,
757 LMESH,14,16,2,
758 LMESH,19,21,2,
759 LMESH,24,26,2,
760 LMESH,29,31,2,
761 LMESH,93,94,1,
762 LMESH,96,124,2,
763 LMESH,107,109,2,
764 LMESH,123,
765 MAT,1,
766 TYPE,17,
767 LMESH,137,140,1,
768 MAT,13,
769 TYPE,17,
770 LMESH,70,72,2,
771 LMESH,74,
772 LMESH,92,
773 /COM,
774 FINISH
775 /COM, *****
776 /COM,          Create element mesh plots to illustrate model
777 /COM,          View mesh for entire model
778 /RESET
779 /TRIAD,OFF,
780 /NUM,1,
781 /PNUM,MAT,1,
782 /TYPE,HIDP,
783 /GLINE,,0,
784 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
785 /TITLE,44 BWR UCF/Waste Package - 1/2 FEM Model
786 /SHOW,meshfull,grph,1,8,
787 EPLOT
788 ESEL,U,MAT,,7,

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789 /SHOW,meshgap,grph,1,8,
790 EPLT
791 /COM,          View mesh for radiation substructure
792 /PNUM,MAT, 0,
793 /PNUM,TYPE, 1,
794 ESEL,S,TYPE,,17,
795 /TITLE, 44 BWR UCF/Waste Package - Radiation Matrix
796 /SHOW,meshrad,grph,1,8,
797 EPLT
798 ESEL,ALL,
799 /TITLE, 44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
800 /COM,          *****
801 /COM,          Generate super-elements
802 /AUX12,
803 ESEL,S,TYPE,,17,
804 NSLE,S,
805 STEF,5.67E-8,
806 GEOM,1,0,
807 VTYPE,0,800,
808 WRITE,spaces,
809 ESEL,ALL,
810 NSEL,ALL,
811 FINISH
812 /PREP7,
813 TYPE,18,
814 SE,spaces,
815 /COM,          Delete radiation edge elements
816 LSEL,S,TYPE,,17,
817 LCLEAR,ALL,
818 LSEL,ALL,
819 FINISH
820 /COM,          *****
821 /COM,          Set solution parameters and apply B.C.'s
822 /COM,
823 /COM,          Solve steady-state for initial conditions
824 /COM,          with WP surface equal to drift ambient
825 /COM,          temperature from repository model.
826 /SOLU
827 ANTYPE,TRAN,NEW,
828 NROPT,AUTO,
829 TRNOPT,FULL,
830 TOFFST,273.15,
831 LSEL,S,LINE,,6,
832 LSEL,A,LINE,,7,
833 NSLL,S,1,
834 D,ALL,TEMP,DFAMBT,
835 LSEL,ALL,
836 NSEL,ALL,
837 ASEL,S,MAT,,14,
838 ESLA,S,
839 BFE,ALL,HGEN,,(FUEL(TM_START)),
840 ASEL,ALL,
841 ESEL,ALL,
842 TIMINT,OFF,
843 TIME,1e-6,
844 AUTOTS,ON,
845 KBC,0,
846 SOLVE
847 /COM,          Solve steady-state for initial conditions
848 /COM,          with WP surface temperatures from repository
849 /COM,          steady-state solution.
850 LSEL,S,LINE,,6,
851 LSEL,A,LINE,,7,
852 NSLL,S,1,
853 DDELE,ALL,TEMP,
854 LSEL,ALL,
855 NSEL,ALL,
856 DK,11,TEMP,(WPTOP(TM_START)),,1,
857 DK,10,TEMP,(WPSID(TM_START)),,1,
858 DK, 9,TEMP,(WPBOT(TM_START)),,1,

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859 ASEL,S,MAT,,14,
860 ESLA,S,
861 BFE,ALL,HGEN,,(FUEL(TM_START)),
862 ASEL,ALL,
863 ESEL,ALL,
864 TIMINT,OFF,
865 TIME,2e-6,
866 AUTOTS,ON,
867 KBC,0,
868 SOLVE
869 /COM, *****
870 /COM, Set time integration parameters
871 TIMINT,ON,
872 AUTOTS,ON,
873 /COM, Time substep ranges from 10 sec to 1/4 loadstep
874 NSUBST,10,40,5,ON
875 /COM, Begin Transient
876 /COM, Apply loads and solve for 0 to .9 years
877 *DO,TM,TM_START,TME0,TM10
878 TIME,TM,
879 ASEL,S,MAT,,14,
880 ESLA,S,
881 BFE,ALL,HGEN,,(FUEL(TM)),
882 ASEL,ALL
883 ESEL,ALL
884 DK,11,TEMP,(WPTOP(TM)),,1,
885 DK,10,TEMP,(WPSID(TM)),,1,
886 DK, 9,TEMP,(WPBOT(TM)),,1,
887 SOLVE
888 *ENDDO
889 /COM, Apply loads and solve for 1 to 9 years
890 *DO,TM,TME1,TME9,TM11
891 TIME,TM,
892 ASEL,S,MAT,,14,
893 ESLA,S,
894 BFE,ALL,HGEN,,(FUEL(TM)),
895 ASEL,ALL
896 ESEL,ALL
897 DK,11,TEMP,(WPTOP(TM)),,1,
898 DK,10,TEMP,(WPSID(TM)),,1,
899 DK, 9,TEMP,(WPBOT(TM)),,1,
900 SOLVE
901 *ENDDO
902 /COM, Apply loads and solve for 10 to 90 years
903 *DO,TM,TME10,TME90,TM110
904 TIME,TM,
905 ASEL,S,MAT,,14,
906 ESLA,S,
907 BFE,ALL,HGEN,,(FUEL(TM)),
908 ASEL,ALL
909 ESEL,ALL
910 DK,11,TEMP,(WPTOP(TM)),,1,
911 DK,10,TEMP,(WPSID(TM)),,1,
912 DK, 9,TEMP,(WPBOT(TM)),,1,
913 SOLVE
914 *ENDDO
915 /COM, Apply loads and solve for 100 to 1000 years
916 *DO,TM,TME100,TME1000,TM1100
917 TIME,TM,
918 ASEL,S,MAT,,14,
919 ESLA,S,
920 BFE,ALL,HGEN,,(FUEL(TM)),
921 ASEL,ALL
922 ESEL,ALL
923 DK,11,TEMP,(WPTOP(TM)),,1,
924 DK,10,TEMP,(WPSID(TM)),,1,
925 DK, 9,TEMP,(WPBOT(TM)),,1,
926 SOLVE
927 *ENDDO
928 FINISH

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929 SAVE,
930 /COM, *****
931 /COM,          Create element contour plots of solution results
932 /COM,
933 /COM,          Sort through solution results for time of max temp.
934 /POST26,
935 NSOL,2,(NODE((THWLL+SCELL),(-1.0*THWLL-SCELL),0.0)),TEMP,,peakclad,
936 STORE,NEW,
937 *GET,TMTMAX,VARI,2,EXTREM,TMAX,
938 FINISH
939 /POST1,
940 /COM,          Create temperature contour plots of WP at peak
941 /RESET
942 /TRIAD,OFF,
943 /NUM, 1,
944 /PNUM,MAT, 1,
945 /TYPE,HIDP,
946 /GLINE,, -1,
947 /FOCUS,1,(WPRAD/10.0),0.0,0.0,0,
948 ESEL,U,MAT,,7,
949 SET,NEAR,,,,TMTMAX,
950 /TITLE, 44 BWR UCF/WP at Time of Peak Temp. (%TMTMAX/3.15576E7% years)
951 /SHOW,solupk,grph,0,8,
952 /CONTOUR,1,128,AUTO,
953 PLNSOL,TEMP,
954 /COM,          Create temperature contour plots at 10, 50, and 100 yrs
955 SET,NEAR,,,,TME10,
956 /TITLE, 44 BWR UCF/WP at 10 years
957 /SHOW,solu10,grph,0,8,
958 /CONTOUR,1,128,USER,
959 PLNSOL,TEMP,
960 SET,NEAR,,,,TME50,
961 /TITLE, 44 BWR UCF/WP at 50 years
962 /SHOW,solu50,grph,0,8,
963 /CONTOUR,1,128,USER,
964 PLNSOL,TEMP,
965 SET,NEAR,,,,TME100,
966 /TITLE, 44 BWR UCF/WP at 100 years
967 /SHOW,solu100,grph,0,8,
968 /CONTOUR,1,128,USER,
969 PLNSOL,TEMP,
970 ESEL,ALL,
971 FINISH
972 /COM, *****
973 /COM,          Set some needed variable values:
974 /COM,
975 DATM=THWLL+SCELL
976 DAT1=DATM+PITCH
977 DAT2=DATM+(2.0*PITCH)
978 DAT3=DATM+(3.0*PITCH)
979 /COM,
980 /COM, *****
981 /COM,          Print time/temperature output at specific locations
982 /COM,          Save profile from center to edge
983 /COM,
984 /COM,          Variable Legend: A01i000
985 /COM,          c = center of assembly
986 /COM,          h = halfway between center and tube
987 /COM,          s = inside structural stainless tube layer
988 /COM,          t = stainless tube cladding
989 /COM,          g = tube guide
990 /COM,          i = inner barrier of DC
991 /COM,          o = outer barrier of DC
992 /COM,          ## = ID number of assembly (01 is center)
993 /COM,          i = side of assembly toward center of WP
994 /COM,          o = side of assembly toward edge of WP
995 /COM,          000 = profile center down
996 /COM,          045 = profile 45 deg down
997 /COM,          090 = profile center side
998 /COM,          135 = profile 45 deg up

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999 /COM, 180 = profile center up
1000 /POST26,
1001 NUMVAR,30,
1002 /COM,
1003 /COM, *****
1004 /COM, *Temperature Profile from center offset to bottom of WP (0 deg.)*
1005 /COM, *****
1006 NSOL, 2, (NODE( DATM, 0.0,0.0)),TEMP,,ts1i000,
1007 NSOL, 3, (NODE( DATM, (0.0-THWLL),0.0)),TEMP,,t01i000,
1008 NSOL, 4, (NODE( DATM, (0.0-THWLL-SWALL),0.0)),TEMP,,s01i000,
1009 NSOL, 5, (NODE( DATM, (0.0-DATM+QCELL),0.0)),TEMP,,h01i000,
1010 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i000,
1011 NSOL, 7, (NODE( DATM, (0.0-DATM-QCELL),0.0)),TEMP,,h01o000,
1012 NSOL, 8, (NODE( DATM, (0.0-DATM-HCELL),0.0)),TEMP,,s01o000,
1013 NSOL, 9, (NODE( DATM, (0.0-DATM-SCCELL),0.0)),TEMP,,t01o000,
1014 NSOL,10, (NODE( DATM, (0.0-DAT1+HCELL),0.0)),TEMP,,s09i000,
1015 NSOL,11, (NODE( DATM, (0.0-DAT1+QCELL),0.0)),TEMP,,h09i000,
1016 NSOL,12, (NODE( DATM, (0.0-DAT1),0.0)),TEMP,,c09i000,
1017 NSOL,13, (NODE( DATM, (0.0-DAT1-QCELL),0.0)),TEMP,,h09o000,
1018 NSOL,14, (NODE( DATM, (0.0-DAT1-HCELL),0.0)),TEMP,,s09o000,
1019 NSOL,15, (NODE( DATM, (0.0-DAT1-SCCELL),0.0)),TEMP,,t09o000,
1020 NSOL,16, (NODE( DATM, (0.0-DAT2+HCELL),0.0)),TEMP,,s15i000,
1021 NSOL,17, (NODE( DATM, (0.0-DAT2+QCELL),0.0)),TEMP,,h15i000,
1022 NSOL,18, (NODE( DATM, (0.0-DAT2),0.0)),TEMP,,c15i000,
1023 NSOL,19, (NODE( DATM, (0.0-DAT2-QCELL),0.0)),TEMP,,h15o000,
1024 NSOL,20, (NODE( DATM, (0.0-DAT2-HCELL),0.0)),TEMP,,s15o000,
1025 NSOL,21, (NODE( DATM, (0.0-DAT2-SCCELL),0.0)),TEMP,,t15o000,
1026 NSOL,22, (NODE( DATM, (0.0-DAT3+HCELL),0.0)),TEMP,,s21i000,
1027 NSOL,23, (NODE( DATM, (0.0-DAT3+QCELL),0.0)),TEMP,,h21i000,
1028 NSOL,24, (NODE( DATM, (0.0-DAT3),0.0)),TEMP,,c21i000,
1029 NSOL,25, (NODE( DATM, (0.0-DAT3-QCELL),0.0)),TEMP,,h21o000,
1030 NSOL,26, (NODE( DATM, (0.0-DAT3-HCELL),0.0)),TEMP,,s21o000,
1031 NSOL,27, (NODE( DATM, (0.0-DAT3-SCCELL),0.0)),TEMP,,t21o000,
1032 NSOL,28, (NODE( DATM, (OWALL+IWALL-DCRAD),0.0)),TEMP,,i21i000,
1033 NSOL,29, (NODE( DATM, (OWALL-DCRAD),0.0)),TEMP,,i21o000,
1034 NSOL,30, (NODE( DATM, (0.0-DCRAD),0.0)),TEMP,,o21o000,
1035 PRVAR, 2, 3, 4, 5, 6, 7,
1036 PRVAR, 8, 9,10,11,12,13,
1037 PRVAR,14,15,16,17,18,19,
1038 PRVAR,20,21,22,23,24,25,
1039 PRVAR,26,27,28,29,30,
1040 /COM,
1041 /COM, *****
1042 /COM, * Temperature Profile from center to lower right (45 deg.) *
1043 /COM, *****
1044 NSOL, 2, (NODE( 0.0, 0.0,0.0)),TEMP,,ts1i045,
1045 NSOL, 3, (NODE( THWLL, (0.0-THWLL),0.0)),TEMP,,t01i045,
1046 NSOL, 4, (NODE( (THWLL+SWALL), (0.0-THWLL-SWALL),0.0)),TEMP,,s01i045,
1047 NSOL, 5, (NODE( (DATM+QCELL), (0.0-DATM+QCELL),0.0)),TEMP,,h01i045,
1048 NSOL, 6, (NODE( DATM, (0.0-DATM),0.0)),TEMP,,c01i045,
1049 NSOL, 7, (NODE( (DATM+QCELL), (0.0-DATM-QCELL),0.0)),TEMP,,h01o045,
1050 NSOL, 8, (NODE( (DATM+HCELL), (0.0-DATM-HCELL),0.0)),TEMP,,s01o045,
1051 NSOL, 9, (NODE( (DATM+SCCELL), (0.0-DATM-SCCELL),0.0)),TEMP,,t01o045,
1052 NSOL,10, (NODE( (DAT1+HCELL), (0.0-DAT1+HCELL),0.0)),TEMP,,s11i045,
1053 NSOL,11, (NODE( (DAT1+QCELL), (0.0-DAT1+QCELL),0.0)),TEMP,,h11i045,
1054 NSOL,12, (NODE( DAT1, (0.0-DAT1),0.0)),TEMP,,c11i045,
1055 NSOL,13, (NODE( (DAT1+QCELL), (0.0-DAT1-QCELL),0.0)),TEMP,,h11o045,
1056 NSOL,14, (NODE( (DAT1+HCELL), (0.0-DAT1-HCELL),0.0)),TEMP,,s11o045,
1057 NSOL,15, (NODE( (DAT1+SCCELL), (0.0-DAT1-SCCELL),0.0)),TEMP,,t11o045,
1058 NSOL,16, (NODE( (DAT2+HCELL), (0.0-DAT2+HCELL),0.0)),TEMP,,s19i045,
1059 NSOL,17, (NODE( (DAT2+QCELL), (0.0-DAT2+QCELL),0.0)),TEMP,,h19i045,
1060 NSOL,18, (NODE( DAT2, (0.0-DAT2),0.0)),TEMP,,c19i045,
1061 NSOL,19, (NODE( (DAT2+QCELL), (0.0-DAT2-QCELL),0.0)),TEMP,,h19o045,
1062 NSOL,20, (NODE( (DAT2+HCELL), (0.0-DAT2-HCELL),0.0)),TEMP,,s19o045,
1063 NSOL,21, (NODE( (DAT2+SCCELL), (0.0-DAT2-SCCELL),0.0)),TEMP,,t19o045,
1064 NSOL,22, (NODE( DM45, (-1.0*DM45),0.0)),TEMP,,i19o045,
1065 NSOL,23, (NODE( DO45, (-1.0*DO45),0.0)),TEMP,,o19o045,
1066 /COM, Add centers of assemblies 13 and 17
1067 NSOL,24, (NODE( DAT2, (-1.0*DAT1),0.0)),TEMP,,c13i045,
1068 NSOL,25, (NODE( DAT1, (-1.0*DAT2),0.0)),TEMP,,c17i045,

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1069 PRVAR, 2, 3, 4, 5, 6, 7,
1070 PRVAR, 8, 9,10,11,12,13,
1071 PRVAR,14,15,16,17,18,19,
1072 PRVAR,20,21,22,23,24,25,
1073 /COM,
1074 /COM, *****
1075 /COM, *Temp. Profile from lower center offset to side of WP (90 deg.)*
1076 /COM, *****
1077 NSOL, 2,(NODE( 0.0,(0.0-DATM),0.0)),TEMP,,ts2i180,
1078 NSOL, 3,(NODE( (THWLL),(0.0-DATM),0.0)),TEMP,,t02i180,
1079 NSOL, 4,(NODE( (THWLL+SWALL),(0.0-DATM),0.0)),TEMP,,s02i180,
1080 NSOL, 5,(NODE( (DATM-QCELL),(0.0-DATM),0.0)),TEMP,,h02i180,
1081 NSOL, 6,(NODE( (DATM),(0.0-DATM),0.0)),TEMP,,c02i180,
1082 NSOL, 7,(NODE( (DATM+QCELL),(0.0-DATM),0.0)),TEMP,,h02o180,
1083 NSOL, 8,(NODE( (DATM+HCELL),(0.0-DATM),0.0)),TEMP,,s02o180,
1084 NSOL, 9,(NODE( (DATM+SCELL),(0.0-DATM),0.0)),TEMP,,t02o180,
1085 NSOL,10,(NODE( (DAT1-HCELL),(0.0-DATM),0.0)),TEMP,,s10i180,
1086 NSOL,11,(NODE( (DAT1-QCELL),(0.0-DATM),0.0)),TEMP,,h10i180,
1087 NSOL,12,(NODE( (DAT1),(0.0-DATM),0.0)),TEMP,,c10i180,
1088 NSOL,13,(NODE( (DAT1+QCELL),(0.0-DATM),0.0)),TEMP,,h10o180,
1089 NSOL,14,(NODE( (DAT1+HCELL),(0.0-DATM),0.0)),TEMP,,s10o180,
1090 NSOL,15,(NODE( (DAT1+SCELL),(0.0-DATM),0.0)),TEMP,,t10o180,
1091 NSOL,16,(NODE( (DAT2-HCELL),(0.0-DATM),0.0)),TEMP,,s16i180,
1092 NSOL,17,(NODE( (DAT2-QCELL),(0.0-DATM),0.0)),TEMP,,h16i180,
1093 NSOL,18,(NODE( (DAT2),(0.0-DATM),0.0)),TEMP,,c16i180,
1094 NSOL,19,(NODE( (DAT2+QCELL),(0.0-DATM),0.0)),TEMP,,h16o180,
1095 NSOL,20,(NODE( (DAT2+HCELL),(0.0-DATM),0.0)),TEMP,,s16o180,
1096 NSOL,21,(NODE( (DAT2+SCELL),(0.0-DATM),0.0)),TEMP,,t16o180,
1097 NSOL,22,(NODE( (DAT3-HCELL),(0.0-DATM),0.0)),TEMP,,s22i180,
1098 NSOL,23,(NODE( (DAT3-QCELL),(0.0-DATM),0.0)),TEMP,,h22i180,
1099 NSOL,24,(NODE( (DAT3),(0.0-DATM),0.0)),TEMP,,c22i180,
1100 NSOL,25,(NODE( (DAT3+QCELL),(0.0-DATM),0.0)),TEMP,,h22o180,
1101 NSOL,26,(NODE( (DAT3+HCELL),(0.0-DATM),0.0)),TEMP,,s22o180,
1102 NSOL,27,(NODE( (DAT3+SCELL),(0.0-DATM),0.0)),TEMP,,t22o180,
1103 NSOL,28,(NODE( (DCRAD-OWALL-IWALL),(0.0-DATM),0.0)),TEMP,,i22i180,
1104 NSOL,29,(NODE( (DCRAD-OWALL),(0.0-DATM),0.0)),TEMP,,i22o180,
1105 NSOL,30,(NODE( (DCRAD),(0.0-DATM),0.0)),TEMP,,o22o180,
1106 PRVAR, 2, 3, 4, 5, 6, 7,
1107 PRVAR, 8, 9,10,11,12,13,
1108 PRVAR,14,15,16,17,18,19,
1109 PRVAR,20,21,22,23,24,25,
1110 PRVAR,26,27,28,29,30,
1111 /COM, *****
1112 /COM, *Temp. Profile from upper center offset to side of WP (90 deg.)*
1113 /COM, *****
1114 NSOL, 2,(NODE( 0.0, DATM,0.0)),TEMP,,ts2i180,
1115 NSOL, 3,(NODE( (THWLL), DATM,0.0)),TEMP,,t02i180,
1116 NSOL, 4,(NODE( (THWLL+SWALL), DATM,0.0)),TEMP,,s02i180,
1117 NSOL, 5,(NODE( (DATM-QCELL), DATM,0.0)),TEMP,,h02i180,
1118 NSOL, 6,(NODE( (DATM), DATM,0.0)),TEMP,,c02i180,
1119 NSOL, 7,(NODE( (DATM+QCELL), DATM,0.0)),TEMP,,h02o180,
1120 NSOL, 8,(NODE( (DATM+HCELL), DATM,0.0)),TEMP,,s02o180,
1121 NSOL, 9,(NODE( (DATM+SCELL), DATM,0.0)),TEMP,,t02o180,
1122 NSOL,10,(NODE( (DAT1-HCELL), DATM,0.0)),TEMP,,s10i180,
1123 NSOL,11,(NODE( (DAT1-QCELL), DATM,0.0)),TEMP,,h10i180,
1124 NSOL,12,(NODE( (DAT1), DATM,0.0)),TEMP,,c10i180,
1125 NSOL,13,(NODE( (DAT1+QCELL), DATM,0.0)),TEMP,,h10o180,
1126 NSOL,14,(NODE( (DAT1+HCELL), DATM,0.0)),TEMP,,s10o180,
1127 NSOL,15,(NODE( (DAT1+SCELL), DATM,0.0)),TEMP,,t10o180,
1128 NSOL,16,(NODE( (DAT2-HCELL), DATM,0.0)),TEMP,,s16i180,
1129 NSOL,17,(NODE( (DAT2-QCELL), DATM,0.0)),TEMP,,h16i180,
1130 NSOL,18,(NODE( (DAT2), DATM,0.0)),TEMP,,c16i180,
1131 NSOL,19,(NODE( (DAT2+QCELL), DATM,0.0)),TEMP,,h16o180,
1132 NSOL,20,(NODE( (DAT2+HCELL), DATM,0.0)),TEMP,,s16o180,
1133 NSOL,21,(NODE( (DAT2+SCELL), DATM,0.0)),TEMP,,t16o180,
1134 NSOL,22,(NODE( (DAT3-HCELL), DATM,0.0)),TEMP,,s22i180,
1135 NSOL,23,(NODE( (DAT3-QCELL), DATM,0.0)),TEMP,,h22i180,
1136 NSOL,24,(NODE( (DAT3), DATM,0.0)),TEMP,,c22i180,
1137 NSOL,25,(NODE( (DAT3+QCELL), DATM,0.0)),TEMP,,h22o180,
1138 NSOL,26,(NODE( (DAT3+HCELL), DATM,0.0)),TEMP,,s22o180,

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1139 NSOL,27,(NODE(      (DAT3+SCELL),      DATM,0.0)),TEMP,,t22o180,
1140 NSOL,28,(NODE((DCRAD-OWALL-IWALL),      DATM,0.0)),TEMP,,i22i180,
1141 NSOL,29,(NODE(      (DCRAD-OWALL),      DATM,0.0)),TEMP,,i22o180,
1142 NSOL,30,(NODE(      (DCRAD),      DATM,0.0)),TEMP,,o22o180,
1143 PRVAR, 2, 3, 4, 5, 6, 7,
1144 PRVAR, 8, 9,10,11,12,13,
1145 PRVAR,14,15,16,17,18,19,
1146 PRVAR,20,21,22,23,24,25,
1147 PRVAR,26,27,28,29,30,
1148 /COM,
1149 /COM, *****
1150 /COM, * Temperature Profile from center to upper right (135 deg.) *
1151 /COM, *****
1152 NSOL, 2,(NODE(      0.0,      0.0,0.0)),TEMP,,ts2i135,
1153 NSOL, 3,(NODE(      THWLL,      (THWLL),0.0)),TEMP,,t02i135,
1154 NSOL, 4,(NODE(      (THWLL+SWALL),      (THWLL+SWALL),0.0)),TEMP,,s02i135,
1155 NSOL, 5,(NODE(      (DATM-QCELL),      (DATM-QCELL),0.0)),TEMP,,h02i135,
1156 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i135,
1157 NSOL, 7,(NODE(      (DATM+QCELL),      (DATM+QCELL),0.0)),TEMP,,h02o135,
1158 NSOL, 8,(NODE(      (DATM+HCELL),      (DATM+HCELL),0.0)),TEMP,,s02o135,
1159 NSOL, 9,(NODE(      (DATM+SCELL),      (DATM+SCELL),0.0)),TEMP,,t02o135,
1160 NSOL,10,(NODE(      (DAT1-HCELL),      (DAT1-HCELL),0.0)),TEMP,,s12i135,
1161 NSOL,11,(NODE(      (DAT1-QCELL),      (DAT1-QCELL),0.0)),TEMP,,h12i135,
1162 NSOL,12,(NODE(      DAT1,      (DAT1),0.0)),TEMP,,c12i135,
1163 NSOL,13,(NODE(      (DAT1+QCELL),      (DAT1+QCELL),0.0)),TEMP,,h12o135,
1164 NSOL,14,(NODE(      (DAT1+HCELL),      (DAT1+HCELL),0.0)),TEMP,,s12o135,
1165 NSOL,15,(NODE(      (DAT1+SCELL),      (DAT1+SCELL),0.0)),TEMP,,t12o135,
1166 NSOL,16,(NODE(      (DAT2-HCELL),      (DAT2-HCELL),0.0)),TEMP,,s20i135,
1167 NSOL,17,(NODE(      (DAT2-QCELL),      (DAT2-QCELL),0.0)),TEMP,,h20i135,
1168 NSOL,18,(NODE(      DAT2,      (DAT2),0.0)),TEMP,,c20i135,
1169 NSOL,19,(NODE(      (DAT2+QCELL),      (DAT2+QCELL),0.0)),TEMP,,h20o135,
1170 NSOL,20,(NODE(      (DAT2+HCELL),      (DAT2+HCELL),0.0)),TEMP,,s20o135,
1171 NSOL,21,(NODE(      (DAT2+SCELL),      (DAT2+SCELL),0.0)),TEMP,,t20o135,
1172 NSOL,22,(NODE(      DM45,      (1.0*DM45),0.0)),TEMP,,i20o135,
1173 NSOL,23,(NODE(      DO45,      (1.0*DO45),0.0)),TEMP,,o20o135,
1174 /COM, Add centers of assemblies 13 and 17
1175 NSOL,24,(NODE(      DAT2,      DAT1,0.0)),TEMP,,c14i135,
1176 NSOL,25,(NODE(      DAT1,      DAT2,0.0)),TEMP,,c18i135,
1177 PRVAR, 2, 3, 4, 5, 6, 7,
1178 PRVAR, 8, 9,10,11,12,13,
1179 PRVAR,14,15,16,17,18,19,
1180 PRVAR,20,21,22,23,24,25,
1181 /COM,
1182 /COM, *****
1183 /COM, *Temperature Profile from center offset to top of WP (180 deg.)*
1184 /COM, *****
1185 NSOL, 2,(NODE(      DATM,      0.0,0.0)),TEMP,,ts2i180,
1186 NSOL, 3,(NODE(      DATM,      (THWLL),0.0)),TEMP,,t02i180,
1187 NSOL, 4,(NODE(      DATM,      (THWLL+SWALL),0.0)),TEMP,,s02i180,
1188 NSOL, 5,(NODE(      DATM,      (DATM-QCELL),0.0)),TEMP,,h02i180,
1189 NSOL, 6,(NODE(      DATM,      (DATM),0.0)),TEMP,,c02i180,
1190 NSOL, 7,(NODE(      DATM,      (DATM+QCELL),0.0)),TEMP,,h02o180,
1191 NSOL, 8,(NODE(      DATM,      (DATM+HCELL),0.0)),TEMP,,s02o180,
1192 NSOL, 9,(NODE(      DATM,      (DATM+SCELL),0.0)),TEMP,,t02o180,
1193 NSOL,10,(NODE(      DATM,      (DAT1-HCELL),0.0)),TEMP,,s10i180,
1194 NSOL,11,(NODE(      DATM,      (DAT1-QCELL),0.0)),TEMP,,h10i180,
1195 NSOL,12,(NODE(      DATM,      (DAT1),0.0)),TEMP,,c10i180,
1196 NSOL,13,(NODE(      DATM,      (DAT1+QCELL),0.0)),TEMP,,h10o180,
1197 NSOL,14,(NODE(      DATM,      (DAT1+HCELL),0.0)),TEMP,,s10o180,
1198 NSOL,15,(NODE(      DATM,      (DAT1+SCELL),0.0)),TEMP,,t10o180,
1199 NSOL,16,(NODE(      DATM,      (DAT2-HCELL),0.0)),TEMP,,s16i180,
1200 NSOL,17,(NODE(      DATM,      (DAT2-QCELL),0.0)),TEMP,,h16i180,
1201 NSOL,18,(NODE(      DATM,      (DAT2),0.0)),TEMP,,c16i180,
1202 NSOL,19,(NODE(      DATM,      (DAT2+QCELL),0.0)),TEMP,,h16o180,
1203 NSOL,20,(NODE(      DATM,      (DAT2+HCELL),0.0)),TEMP,,s16o180,
1204 NSOL,21,(NODE(      DATM,      (DAT2+SCELL),0.0)),TEMP,,t16o180,
1205 NSOL,22,(NODE(      DATM,      (DAT3-HCELL),0.0)),TEMP,,s22i180,
1206 NSOL,23,(NODE(      DATM,      (DAT3-QCELL),0.0)),TEMP,,h22i180,
1207 NSOL,24,(NODE(      DATM,      (DAT3),0.0)),TEMP,,c22i180,
1208 NSOL,25,(NODE(      DATM,      (DAT3+QCELL),0.0)),TEMP,,h22o180,

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1209 NSOL,26,(NODE(          DATM,          (DAT3+HCELL),0.0)),TEMP,,s22o180,
1210 NSOL,27,(NODE(          DATM,          (DAT3+SCELL),0.0)),TEMP,,t22o180,
1211 NSOL,28,(NODE(          DATM,(DCRAD-OWALL-IWALL),0.0)),TEMP,,i22i180,
1212 NSOL,29,(NODE(          DATM,          (DCRAD-OWALL),0.0)),TEMP,,i22o180,
1213 NSOL,30,(NODE(          DATM,          (DCRAD),0.0)),TEMP,,o22o180,
1214 PRVAR, 2, 3, 4, 5, 6, 7,
1215 PRVAR, 8, 9,10,11,12,13,
1216 PRVAR,14,15,16,17,18,19,
1217 PRVAR,20,21,22,23,24,25,
1218 PRVAR,26,27,28,29,30,
1219 FINISH
1220 /COM, *****
1221 /COM,          End of batch input file
1222 /COM, *****
1223 /EXIT,
1224 /EOF

```

RUN SETUP PROCEDURE FROM FILE= /ansys50a/docu/start.ans

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/INPUT FILE= /ansys50a/docu/start.ans LINE=      0
*****
ANSYS STARTUP FILE start.ans
*****

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ABBREVIATION= K1      /pnum,kp ,1,
ABBREVIATION= K0      /pnum,kp ,0,
ABBREVIATION= L1      /pnum,line,1,
ABBREVIATION= L0      /pnum,line,0,
ABBREVIATION= A1      /pnum,area,1,
ABBREVIATION= A0      /pnum,area,0,
ABBREVIATION= V1      /pnum,volu,1,
ABBREVIATION= V0      /pnum,volu,0,
ABBREVIATION= N1      /pnum,node,1,
ABBREVIATION= N0      /pnum,node,0,
ABBREVIATION= E1      /pnum,elem,1,
ABBREVIATION= E0      /pnum,elem,0,
ABBREVIATION= M1      /pnum,mat ,1,
ABBREVIATION= M0      /pnum,mat ,0,
ABBREVIATION= R1      /pnum,real,1,
ABBREVIATION= R0      /pnum,real,0,
ABBREVIATION= T1      /pnum,type,1,
ABBREVIATION= T0      /pnum,type,0,
ABBREVIATION= C1      /number,1,
ABBREVIATION= C0      /number,0,
ABBREVIATION= INP     /input,,inp,
ABBREVIATION= X3D     /show,3d,
ABBREVIATION= X11     /show,x11,

```

```

ABBREVIATION= VEC      /show,,,1,
ABBREVIATION= RAS      /show,,,0,
ABBREVIATION= ON       /menu,on,
ABBREVIATION= OFF      /menu,off,
ABBREVIATION= NVP      /config,nvpag,512,
ABBREVIATION= QUIT     /exit,nosav,
XYZ TRIAD DISPLAY SET TO OFF

```

VIEW CONE ANGLE FOR WINDOW 1 25.00

```

*****
END start.ans
*****

```

To start ANSYS menu:

```

type:  x3d  for console
       x11  for X-term

```

type: on

```

*****
*****
ANSYS REVISION  5.0A                      6/16/1995
2-D Model of 125 ton burnup credit UCF-DC      Thomas L. Lotz
*****
*
* File name: ucf44h.inp                      *
*   44 BWR UCF with Low T.L. Disposal Container *
*   Helium Fill Gas                          *
*
* Material Property file: props01.dat         *
*
* SNF Conductivity file:  pwr15e.parm (Check for Changes) *
*   GE-7 8x8 SNF BWR Assembly  (Assumed Conservative) *
*
* SNF Heat Loads file:   bwr1049.dat         *
*   SNF Type: 10 years old, 49000 MWD/MTU    *
*
* Surface Temp. file:    c21h5a.parm        *
*   25 MTU/acre (6.18 kgU/m^2) AML (Low Thermal Loading) *
*   5.0 m Diameter Drift with Concrete Invert *
*   Drift spacing = 90.0 m                    *
*   WP c/c spacing = 16.165 m                *
*
*****

```

Increase the number of database pages from 16 (256) to 32 Mb

NUMBER OF DATA BASE PAGES IN MEMORY(NVPAGE)= 512

Work space must also be increased (-m 64)

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

SI UNITS SPECIFIED

```

LENGTH      = METERS(M)
MASS         = KILOGRAMS(KG)
TIME         = SECONDS(SEC)
TEMPERATURE  = CENTIGRADE
CURRENT      = AMPS

```

```

*****
Read in average effective conductivities from SNF model

```

*** NOTE ***

CP= .700 TIME= 20:47:06

Restore ANSYS parameters from file= pwr15e.parm.

/INPUT FILE= pwr15e.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Read in surface temps. from repository model

*** NOTE ***

CP= .930 TIME= 20:47:06

Restore ANSYS parameters from file= c21h5a.parm.

/INPUT FILE= c21h5a.parm LINE= 0

PRINTOUT RESUMED BY /GOP

Define Required Constants:

PARAMETER PI = 3.141593

Define UCF/waste package parameters

(UCF dimensions converted from inches/cm/mm to meters were requi

MIRAD = inner radius of UCF He Backfill shell (m) (NOT

MWALL = UCF He Backfill shell thickness (m) (NOT

DCRAD = disposal container outer radius (m)

OWALL = outer barrier thickness (m)

IWALL = inner barrier thickness (m)

DCIRD = disposal container inner radius (m)

GCORL = corner guide long side width (m)

GCORS = corner guide short side width (m)

GWALL = basket guide thickness (m)

GLEN1 = side guide 1/3 width (m) (NOT USED)

GLENT = side guide total width (m) (NOT USED)

HCELL = 1/2 of basket cell opening (m)

SWALL = stainless tube thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

TWALL = Aluminum thermal shunt thickness (m)

THWLL = 1/2 Aluminum thermal shunt thickness (m)

ACTVL = active fuel length

PEAKF = assembly heat axial peaking factor

MIRAD=1363.6/1000.0/2.0

MWALL=1.0000*2.54/100.0

PARAMETER DCRAD = .7630000

PARAMETER OWALL = .5000000E-01

PARAMETER IWALL = .2000000E-01

PARAMETER DCIRD = .6930000

PARAMETER GCORL = .3200000

PARAMETER GCORS = .1816000

PARAMETER GWALL = .9500000E-02

GLEN1=9.6170*2.54/100.0

GLENT=28.866*2.54/100.0

PARAMETER HCELL = .7650000E-01

PARAMETER SWALL = .3500000E-02

PARAMETER TWALL = .2000000E-01

PARAMETER THWLL = .1000000E-01

PARAMETER ACTVL = 3.810000

PARAMETER PEAKF = 1.400000

Define calculated parameters

ASSY = assembly heat production (W) f(yrs)

FUEL = volumetric heat production (W/m³) f(yrs)

FVOLU = assy_volume=cell_width^2*active_length

PITCH = basket cell outer width (m)

QCELL = 1/4 of basket cell opening (m)

SCCELL = 1/2 of basket cell opening+SS wall(m)

ACCELL = 1/2 of basket cell opening+SS+AL (m) (NOT USED)

GX## = x coord. of basket guide or thermal shunt/shell c

GX## = y coord. of basket guide or thermal shunt/shell c

MI45 = x coord. MIRAD at 45 deg. (NOT USED)

MO45 = x coord. MIRAD+MWALL at 45 deg. (NOT USED)

DI45 = x coord. DCRAD-OWALL-IWALL at 45 deg.

DM45 = x coord. DCRAD-OWALL at 45 deg.

DO45 = x coord. DCRAD at 45 deg.

ARRAY PARAMETER ASSY DELETED.

SET PARAMETER DIMENSIONS ON ASSY TYPE=TABL DIMENSIONS= 101 1 1

SET PARAMETER DIMENSIONS ON FUEL TYPE=TABL DIMENSIONS= 101 1 1

PARAMETER FVOLU = .8918829E-01

PARAMETER PITCH = .1600000

PARAMETER QCELL = .3825000E-01

PARAMETER SCCELL = .8000000E-01

ACCELL=HCELL+SWALL+AWALL

PARAMETER GX22 = .1000000E-01

PARAMETER GY22 = .6929278

PARAMETER GX23 = .1700000

PARAMETER GY23 = .6718251

PARAMETER GX24 = .1795000

PARAMETER GY24 = .6693495

PARAMETER GY25 = .4995000

PARAMETER GX25 = .4803631

MI45=MIRAD/SQRT(2.0)

MO45=(MIRAD+MWALL)/SQRT(2.0)

PARAMETER DI45 = .4900250

PARAMETER DM45 = .5041671

PARAMETER DO45 = .5395225

Define Transient Time parameters based upon the following:

Note: 1 year = 3.15576e7 seconds
 TM_START = start time (sec)
 TMI* = time increment for solution (sec)
 TME* = start and stop for time do-loops (sec)
 TMTMAX = time of maximum cladding temperature

PARAMETER TM_START = 31.55760
 PARAMETER TMI0 = 3155760.
 PARAMETER TMI1 = .3155760E+08
 PARAMETER TMI10 = .3155760E+09
 PARAMETER TMI100 = .3155760E+10
 PARAMETER TMI1000 = .3155760E+11
 PARAMETER TME0 = .2840187E+08
 PARAMETER TME1 = .3155763E+08
 PARAMETER TME9 = .2840184E+09
 PARAMETER TME10 = .3155760E+09
 PARAMETER TME50 = .1577880E+10
 PARAMETER TME90 = .2840184E+10
 PARAMETER TME100 = .3155760E+10
 PARAMETER TME1000 = .3155760E+11

Define different element types

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 20:47:07 JUN 17, 1995 CP= 1.860
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE 1 IS PLANE55 2-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 TWO-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS SOLID70 3-D THERMAL SOLID
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS LINK32 2-D CONDUCTING BAR
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 16 IS SHELL57 THERMAL SHELL
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP

THREE-DIMENSIONAL MODEL

ELEMENT TYPE 17 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 18 IS MATRIX50 SUBSTRUCTURE MATRIX
KEYOPT(1-12)= 1 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 19 IS LINK31 RADIATION LINK
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 27 IS LINK32 2-D CONDUCTING BAR
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

File props01.dat describes material properties
and thier reference numbers

READ IN MATERIAL PROPERTY LIBRARY FROM FILE= props01.dat

/INPUT FILE= props01.dat LINE= 0

** ANSYS 5.0 MPC MATERIAL PROPERTY TABLES **

** Filename: props01.dat **
** Compiled by R. Bahney III on 1-30-95 **

NUMBER	MATERIAL	DESCRIPTION
1	Stainless Steel 316	Basket Structural Support
2	Incaloy 825	Inner Container (resistant)
3	A516 Mild Steel	Outer Container (allowance)
4	UO2 Pellet	SNF Uranium Oxide Pellet
5	Zircaloy 4	SNF Cladding
6	Oxidation Layer	Stably Oxidized Zircaloy Surface
7	Helium	Canister Fill Gas
8	Air	Alternate Fill Gas
9	Nitrogen	Alternate Fill Gas
10	Argon	Alternate Fill Gas
11	Aluminum 6063	Thermal Conductor
12	Copper	Alternate Thermal Conductor
13	Aluminum-Boron	Aluminum Boron Criticality Matl

** Density: DENS (kg/m^3) **
** Emissivity: EMIS **
** Conductivity: KXX (W/m/K) **
** Specific Heat: C (J/kg/K) **

Define densities for all materials except gases

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 1 NUM. POINTS= 1
SLOC= 1 8000.000

PROPERTY TABLE DENS MAT= 2 NUM. POINTS= 1
SLOC= 1 8137.900

PROPERTY TABLE DENS MAT= 3 NUM. POINTS= 1
SLOC= 1 8131.000

PROPERTY TABLE DENS MAT= 4 NUM. POINTS= 1
SLOC= 1 10970.00

PROPERTY TABLE DENS MAT= 5 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 6 NUM. POINTS= 1
SLOC= 1 6500.000

PROPERTY TABLE DENS MAT= 11 NUM. POINTS= 1
SLOC= 1 2690.000

PROPERTY TABLE DENS MAT= 12 NUM. POINTS= 1
SLOC= 1 8933.000

PROPERTY TABLE DENS MAT= 13 NUM. POINTS= 1
SLOC= 1 2693.000

Define emissivities for all materials except gases

PROPERTY TABLE EMIS MAT= 1 NUM. POINTS= 1
SLOC= 1 .6000000

PROPERTY TABLE EMIS MAT= 2 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 3 NUM. POINTS= 1
SLOC= 1 .8000000

PROPERTY TABLE EMIS MAT= 4 NUM. POINTS= 1
SLOC= 1 .7900000

PROPERTY TABLE EMIS MAT= 5 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 6 NUM. POINTS= 1
SLOC= 1 .8060000

PROPERTY TABLE EMIS MAT= 11 NUM. POINTS= 1
SLOC= 1 .7000000E-01

PROPERTY TABLE EMIS MAT= 12 NUM. POINTS= 1
SLOC= 1 .5000000

PROPERTY TABLE EMIS MAT= 13 NUM. POINTS= 1
SLOC= 1 .7000000E-01

Define specific heat for matl. 4, 5, 6, 7, 11, 14, 15

PROPERTY TABLE C MAT= 4 NUM. POINTS= 1
SLOC= 1 247.0000

PROPERTY TABLE C MAT= 5 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 6 NUM. POINTS= 1
SLOC= 1 330.0000

PROPERTY TABLE C MAT= 7 NUM. POINTS= 1
SLOC= 1 5193.000

PROPERTY TABLE C MAT= 11 NUM. POINTS= 1
SLOC= 1 900.0000

Define K and C for materials 1, 3

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 21.11000 37.78000 65.56000
 93.33000 121.1100 148.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 176.6700 204.4400 232.2200
 260.0000 287.7800 315.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 343.3300 371.1100 398.8900
 426.6700 454.4400 482.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 510.0000 537.7800 565.5600
 593.3300 621.1100 648.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 676.6700 704.4400 732.2200
 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 6
 SLOC= 1 13.33000 13.67000 14.19000 14.54000
 15.06000 15.58000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 12
 SLOC= 7 15.92000 16.44000 16.96000 17.31000
 17.83000 18.17000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 18
 SLOC= 13 18.52000 19.04000 19.38000 19.90000
 20.25000 20.77000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 24
 SLOC= 19 21.11000 21.46000 21.98000 22.33000
 22.67000 23.02000

PROPERTY TABLE KXX MAT= 1 NUM. POINTS= 30
 SLOC= 25 23.54000 23.88000 24.23000 24.58000
 24.92000 25.27000

PROPERTY TABLE C MAT= 1 NUM. POINTS= 6
 SLOC= 1 481.6800 486.9200 498.0900 499.3800
 509.9800 520.2900

PROPERTY TABLE C MAT= 1 NUM. POINTS= 12
 SLOC= 7 521.0700 527.3800 536.9200 537.3400
 543.0200 543.3100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 18
 SLOC= 13 546.9100 552.1400 552.2600 557.2200
 557.2500 565.1100

PROPERTY TABLE C MAT= 1 NUM. POINTS= 24
 SLOC= 19 565.0100 564.9100 572.3500 572.1400
 574.9200 574.6800

PROPERTY TABLE C MAT= 1 NUM. POINTS= 30
 SLOC= 25 581.6400 581.3000 583.8600 586.3600
 585.9600 588.3900

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 6
 SLOC= 1 40.84000 41.36000 41.88000 42.23000
 42.23000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 12

SLOC= 7 42.06000 41.88000 41.36000 41.02000
40.50000 39.98000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 18
SLOC= 13 39.29000 38.77000 38.08000 37.56000
36.69000 36.17000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 24
SLOC= 19 35.48000 34.61000 33.92000 33.23000
32.36000 31.50000

PROPERTY TABLE KXX MAT= 3 NUM. POINTS= 30
SLOC= 25 30.29000 28.90000 27.35000 26.48000
26.13000 26.13000

PROPERTY TABLE C MAT= 3 NUM. POINTS= 6
SLOC= 1 428.7200 444.9500 460.9400 476.8700
486.0800 495.6600

PROPERTY TABLE C MAT= 3 NUM. POINTS= 12
SLOC= 7 506.0900 517.0700 525.6400 536.9900
543.6300 550.6200

PROPERTY TABLE C MAT= 3 NUM. POINTS= 18
SLOC= 13 562.2100 577.3200 589.1000 600.5700
611.3500 629.0900

PROPERTY TABLE C MAT= 3 NUM. POINTS= 24
SLOC= 19 645.3200 665.1200 682.0700 694.5200
724.0700 761.9500

PROPERTY TABLE C MAT= 3 NUM. POINTS= 30
SLOC= 25 806.3100 888.6000 1095.040 1638.780
808.6800 736.9000

Define K for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 93.33000 121.1100 148.8900
176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 260.0000 287.7800 315.5600
343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
SLOC= 13 426.6700 454.4400 482.2200
510.0000 537.7800 565.5600

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
SLOC= 19 593.3300 621.1100 648.8900
676.6700 704.4400 732.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 27 ***
SLOC= 25 760.0000 787.7800 815.5600

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 6
SLOC= 1 12.29000 12.63000 13.15000 13.67000
14.02000 14.54000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 12
SLOC= 7 14.88000 15.40000 15.75000 16.10000
16.61000 16.96000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 18
SLOC= 13 17.31000 17.65000 18.00000 18.52000
18.86000 19.21000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 24
 SLOC= 19 19.73000 20.08000 20.42000 20.94000
 21.46000 21.98000

PROPERTY TABLE KXX MAT= 2 NUM. POINTS= 27
 SLOC= 25 22.33000 23.02000 23.54000

Define C for material 2

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 93.33000 121.1100 148.8900
 176.6700 204.4400 232.2200

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 260.0000 287.7800 315.5600
 343.3300 371.1100 398.8900

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 17 ***
 SLOC= 13 426.6700 454.4400 482.2200
 510.0000 537.7800

PROPERTY TABLE C MAT= 2 NUM. POINTS= 6
 SLOC= 1 460.6900 477.4200 501.0200 504.6500
 498.1200 520.4500

PROPERTY TABLE C MAT= 2 NUM. POINTS= 12
 SLOC= 7 536.8800 559.8500 576.8300 576.2100
 581.6800 598.2000

PROPERTY TABLE C MAT= 2 NUM. POINTS= 17
 SLOC= 13 619.5800 636.7600 654.2000 678.2500
 696.2900

Define K for materials 4, 5, 6

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
 SLOC= 1 .0000000E+00 10.00000 20.00000
 30.00000 40.00000 50.00000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
 SLOC= 7 60.00000 70.00000 80.00000
 90.00000 100.0000 110.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 18 ***
 SLOC= 13 120.0000 130.0000 140.0000
 150.0000 160.0000 170.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 24 ***
 SLOC= 19 180.0000 190.0000 200.0000
 210.0000 220.0000 230.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 30 ***
 SLOC= 25 240.0000 250.0000 260.0000
 270.0000 280.0000 290.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 36 ***
 SLOC= 31 300.0000 310.0000 320.0000
 330.0000 340.0000 350.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 42 ***
 SLOC= 37 360.0000 370.0000 380.0000
 390.0000 400.0000 410.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 48 ***
 SLOC= 43 420.0000 430.0000 440.0000

450.0000 460.0000 470.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 50 ***
SLOC= 48 480.0000 490.0000 500.0000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 6
SLOC= 1 8.720000 8.540000 8.360000 8.190000
8.030000 7.870000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 12
SLOC= 7 7.720000 7.580000 7.440000 7.310000
7.180000 7.050000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 18
SLOC= 13 6.930000 6.820000 6.700000 6.600000
6.490000 6.390000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 24
SLOC= 19 6.290000 6.190000 6.100000 6.010000
5.920000 5.840000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 30
SLOC= 25 5.760000 5.680000 5.600000 5.520000
5.450000 5.380000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 36
SLOC= 31 5.310000 5.240000 5.180000 5.110000
5.050000 4.990000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 42
SLOC= 37 4.930000 4.870000 4.810000 4.760000
4.700000 4.650000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 48
SLOC= 43 4.600000 4.550000 4.500000 4.450000
4.400000 4.350000

PROPERTY TABLE KXX MAT= 4 NUM. POINTS= 50
SLOC= 48 4.310000 4.270000 4.220000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 6
SLOC= 1 12.29000 12.44000 12.58000 12.72000
12.87000 13.01000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 12
SLOC= 7 13.15000 13.28000 13.42000 13.55000
13.69000 13.82000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 18
SLOC= 13 13.95000 14.08000 14.21000 14.34000
14.46000 14.59000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 24
SLOC= 19 14.72000 14.84000 14.96000 15.09000
15.21000 15.33000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 30
SLOC= 25 15.45000 15.57000 15.69000 15.81000
15.93000 16.05000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 36
SLOC= 31 16.17000 16.29000 16.40000 16.52000
16.64000 16.76000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 42
SLOC= 37 16.88000 16.99000 17.11000 17.23000
17.35000 17.46000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 48

SLOC= 43 17.58000 17.70000 17.82000 17.94000
18.06000 18.18000

PROPERTY TABLE KXX MAT= 5 NUM. POINTS= 50
SLOC= 48 18.30000 18.42000 18.54000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 6
SLOC= 1 1.940000 1.940000 1.940000 1.940000
1.940000 1.940000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 12
SLOC= 7 1.940000 1.950000 1.950000 1.950000
1.950000 1.950000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 18
SLOC= 13 1.950000 1.950000 1.960000 1.960000
1.960000 1.960000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 24
SLOC= 19 1.960000 1.970000 1.970000 1.970000
1.970000 1.980000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 30
SLOC= 25 1.980000 1.980000 1.980000 1.990000
1.990000 1.990000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 36
SLOC= 31 2.000000 2.000000 2.000000 2.010000
2.010000 2.010000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 42
SLOC= 37 2.020000 2.020000 2.020000 2.030000
2.030000 2.030000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 48
SLOC= 43 2.040000 2.040000 2.040000 2.050000
2.050000 2.060000

PROPERTY TABLE KXX MAT= 6 NUM. POINTS= 50
SLOC= 48 2.060000 2.060000 2.070000

Define p, K, C for materials 7, 8, 9, -10

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -13.15000 6.850000 26.85000
76.85000 126.8500 176.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 12 ***
SLOC= 7 226.8500 276.8500 326.8500
376.8500 426.8500 476.8500

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 15 ***
SLOC= 13 526.8500 626.8500 726.8500

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 6
SLOC= 1 .1875000 .1750000 .1625000 .1422000
.1219000 .1097000

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 12
SLOC= 7 .9750000E-01 .9060000E-01 .8360000E-01 .7670000E-01
.6970000E-01 .6620000E-01

PROPERTY TABLE DENS MAT= 7 NUM. POINTS= 15
SLOC= 13 .6270000E-01 .5580000E-01 .4880000E-01

PROPERTY TABLE KXX MAT= 7 NUM. POINTS= 6
SLOC= 1 .1370000 .1450000 .1520000 .1700000

	.1870000	.2040000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 12		
SLOC= 7	.2200000	.2360000	.2520000	.2640000
	.2780000	.2910000		
PROPERTY TABLE KXX MAT=	7	NUM. POINTS= 15		
SLOC= 13	.3040000	.3300000	.3540000	
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 6		
SLOC= 1	1.348000	1.254700	1.161400	.9950000
	.8711000	.7740000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 12		
SLOC= 7	.6964000	.6329000	.5804000	.5356000
	.4975000	.4643000		
PROPERTY TABLE DENS MAT=	8	NUM. POINTS= 15		
SLOC= 13	.4354000	.3868000	.3482000	
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2500000E-01	.2600000E-01	.3000000E-01
	.3400000E-01	.3700000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 12		
SLOC= 7	.4100000E-01	.4400000E-01	.4700000E-01	.5000000E-01
	.5200000E-01	.5500000E-01		
PROPERTY TABLE KXX MAT=	8	NUM. POINTS= 15		
SLOC= 13	.5700000E-01	.6200000E-01	.6700000E-01	
PROPERTY TABLE C MAT=	8	NUM. POINTS= 6		
SLOC= 1	1006.200	1006.600	1007.000	1009.000
	1014.000	1021.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 12		
SLOC= 7	1030.000	1040.000	1051.000	1063.000
	1075.000	1087.000		
PROPERTY TABLE C MAT=	8	NUM. POINTS= 15		
SLOC= 13	1099.000	1121.000	1141.000	
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 6		
SLOC= 1	1.303700	1.213500	1.123300	.9625000
	.8425000	.7485000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 12		
SLOC= 7	.6739000	.6124000	.5615000	.5214000
	.4812000	.4512000		
PROPERTY TABLE DENS MAT=	9	NUM. POINTS= 15		
SLOC= 13	.4211000	.3743000	.3368000	
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 6		
SLOC= 1	.2300000E-01	.2400000E-01	.2600000E-01	.2900000E-01
	.3300000E-01	.3600000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 12		
SLOC= 7	.3900000E-01	.4200000E-01	.4500000E-01	.4700000E-01
	.5000000E-01	.5200000E-01		
PROPERTY TABLE KXX MAT=	9	NUM. POINTS= 15		
SLOC= 13	.5500000E-01	.6000000E-01	.6500000E-01	
PROPERTY TABLE C MAT=	9	NUM. POINTS= 6		
SLOC= 1	1041.800	1041.400	1041.000	1042.000
	1045.000	1050.000		
PROPERTY TABLE C MAT=	9	NUM. POINTS= 12		
SLOC= 7	1056.000	1065.000	1075.000	1086.500

1098.000 1159.000

PROPERTY TABLE C MAT= 9 NUM. POINTS= 15
SLOC= 13 1220.000 1146.000 1167.000

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 6
SLOC= 1 .1700000E-01 .1700000E-01 .1800000E-01 .2100000E-01
.2300000E-01 .2500000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 12
SLOC= 7 .2700000E-01 .2800000E-01 .3000000E-01 .3200000E-01
.3400000E-01 .3600000E-01

PROPERTY TABLE KXX MAT= 10 NUM. POINTS= 15
SLOC= 13 .3700000E-01 .4100000E-01 .4400000E-01

Define K and C for material 12

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 1 -73.15000 26.85000 126.8500
326.8500 526.8500 726.8500

PROPERTY TABLE KXX MAT= 12 NUM. POINTS= 6
SLOC= 1 413.0000 401.0000 393.0000 379.0000
366.0000 352.0000

PROPERTY TABLE C MAT= 12 NUM. POINTS= 6
SLOC= 1 356.0000 385.0000 397.0000 417.0000
433.0000 451.0000

Define K and C for material 13

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 5 ***
SLOC= 1 23.00000 50.00000 100.0000
150.0000 200.0000

PROPERTY TABLE KXX MAT= 13 NUM. POINTS= 5
SLOC= 1 182.5600 190.1700 199.2200 202.9100
203.7200

PROPERTY TABLE C MAT= 13 NUM. POINTS= 5
SLOC= 1 868.0000 903.0000 946.0000 976.0000
998.0000

** End of Material Property List **

Read in single assembly heat loads
Calculate the volumetric heat generation
(Assembly time is in years, FUEL is in seconds)

/INPUT FILE= bwr1049.dat LINE= 0

** History of SNF Assembly Heat Generation Rates **
** Output of PHIA, SCSI: B00000000-01717-1200-3000X Rev.00B **
**
** Executable File Name: PHIA00B.EXE **
** Output File Name: bwr1049.dat **
** Execution Date: 03/07/95 **
** Start Age (years): 10.0 **
** Decay Period (years): 10000 **
** Enrichment (percent): 3.74 **
** Burnup (MWd/MTU): 49000 **
** Assembly Type: BWR **
** SNF U Mass (MTU/assy): 0.200 **
**

** ASSY(#,1) is the SNF assembly heat in Watts. **
 ** ASSY(#,0) is the time post emplacement in years. **

PARAMETER ASSY(1,1) =	409.4200 408.7300	409.2500 408.5500	409.0700	408.9000
PARAMETER ASSY(7,1) =	408.3800 407.6800	408.2000 406.8200	408.0300	407.8600
PARAMETER ASSY(13,1) =	405.9700 402.6100	405.1200 401.7900	404.2800	403.4400
PARAMETER ASSY(19,1) =	400.9700 397.7400	400.1500 396.9500	399.3400	398.5400
PARAMETER ASSY(25,1) =	396.1600 393.0600	395.3800 386.0700	394.6000	393.8300
PARAMETER ASSY(31,1) =	379.4900 357.2900	373.4300 352.6900	367.7000	362.3600
PARAMETER ASSY(37,1) =	348.3000 331.0000	343.5600 327.1800	339.0300	334.9300
PARAMETER ASSY(43,1) =	323.5200 310.5600	319.9200 280.3200	316.4600	313.4600
PARAMETER ASSY(49,1) =	255.6100 183.3200	233.4000 169.5700	214.5200	197.6200
PARAMETER ASSY(55,1) =	157.9000 122.2500	147.4800 115.4800	138.1500	129.7800
PARAMETER ASSY(61,1) =	109.3700 90.35000	103.8500 64.29000	99.33000	94.47000
PARAMETER ASSY(67,1) =	51.61000 31.79000	43.92000 29.32000	38.89000	34.91000
PARAMETER ASSY(73,1) =	27.23000 21.02000	25.32000 19.82000	23.69000	22.28000
PARAMETER ASSY(79,1) =	18.76000 15.49000	17.81000 10.52000	16.96000	16.20000
PARAMETER ASSY(85,1) =	8.210000 5.640000	7.000000 5.430000	6.340000	5.950000
PARAMETER ASSY(91,1) =	5.250000 4.510000	5.030000 4.350000	4.830000	4.660000
PARAMETER ASSY(97,1) =	4.210000 3.750000	4.080000	3.960000	3.850000
PARAMETER ASSY(1,0) =	.1000000E-05 .4000000E-01	.1000000E-01 .5000000E-01	.2000000E-01	.3000000E-01
PARAMETER ASSY(7,0) =	.6000000E-01 .1000000	.7000000E-01 .1500000	.8000000E-01	.9000000E-01
PARAMETER ASSY(13,0) =	.2000000 .4000000	.2500000 .4500000	.3000000	.3500000
PARAMETER ASSY(19,0) =	.5000000 .7000000	.5500000 .7500000	.6000000	.6500000
PARAMETER ASSY(25,0) =	.8000000 1.000000	.8500000 1.500000	.9000000	.9500000

PARAMETER ASSY(31,0) =	2.000000 4.000000	2.500000 4.500000	3.000000	3.500000
PARAMETER ASSY(37,0) =	5.000000 7.000000	5.500000 7.500000	6.000000	6.500000
PARAMETER ASSY(43,0) =	8.000000 10.00000	8.500000 15.00000	9.000000	9.500000
PARAMETER ASSY(49,0) =	20.00000 40.00000	25.00000 45.00000	30.00000	35.00000
PARAMETER ASSY(55,0) =	50.00000 70.00000	55.00000 75.00000	60.00000	65.00000
PARAMETER ASSY(61,0) =	80.00000 100.0000	85.00000 150.0000	90.00000	95.00000
PARAMETER ASSY(67,0) =	200.0000 400.0000	250.0000 450.0000	300.0000	350.0000
PARAMETER ASSY(73,0) =	500.0000 700.0000	550.0000 750.0000	600.0000	650.0000
PARAMETER ASSY(79,0) =	800.0000 1000.000	850.0000 1500.000	900.0000	950.0000
PARAMETER ASSY(85,0) =	2000.000 4000.000	2500.000 4500.000	3000.000	3500.000
PARAMETER ASSY(91,0) =	5000.000 7000.000	5500.000 7500.000	6000.000	6500.000
PARAMETER ASSY(97,0) =	8000.000 10000.00	8500.000	9000.000	9500.000

PARAMETER ASSY(0,1) = 1.000000

FACTOR ON VECTOR OPERATION RESULT= .31558E+08

FACTOR ON FIRST VECTOR PARAMETER = 1.0000

FACTOR ON SECOND VECTOR PARAMETER = 1.0000

FACTOR ON THIRD VECTOR PARAMETER = 1.0000

MATRIX COPY RESULT MATRIX= FUEL(1,0)

INPUT MATRIX= ASSY(1,0)

INPUT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

RESULT MATRIX SIZE= 101 ROWS BY 2 COLUMNS

FACTOR ON VECTOR OPERATION RESULT= 15.697

FACTOR ON FIRST VECTOR PARAMETER = 1.0000

FACTOR ON SECOND VECTOR PARAMETER = 1.0000

FACTOR ON THIRD VECTOR PARAMETER = 1.0000

VECTOR PARAMETER OPERATION *VFUN

FUEL(1) = COPY ASSY(1)

SCALE FACTORS RESULT= 15.697 INPUT= 1.0000

VECTOR LENGTH= 101

PARAMETER FUEL(0,1) = 1.000000

Define new material 14 for SNF effective conductivity

Density: DENS (kg/m^3)

Conductivity: KXX (W/m/K)

Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***

SLOC= 1 .0000000E+00

PROPERTY TABLE DENS MAT= 14 NUM. POINTS= 1
SLOC= 1 3960.040

PROPERTY TABLE C MAT= 14 NUM. POINTS= 1
SLOC= 1 274.0000
Store average effective conductivities

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 25.00000

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 2 50.00000

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

PARAMETER IINC = 1.000000

PARAMETER TBSKT = 25.00000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 1
SLOC= 1 .4617156

PARAMETER IINC = 2.000000

*DO LOOP ON PARAMETER= TBSKT FROM 50.000 TO 400.00 BY 50.000

PROPERTY TABLE KXX MAT= 14 NUM. POINTS= 2
SLOC= 2 .5036997

PARAMETER IINC = 3.000000

*ENDDO INDEX= TBSKT

Define new material 15 for low thermal loading
outer barrier of 70/30 Copper Nickel (C71500)
Density: DENS (kg/m³)
Conductivity: KXX (W/m/K)
Specific Heat: C (J/kg/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 1 ***
SLOC= 1 .0000000E+00
Density (lb/in³ converted to kg/m³)

PROPERTY TABLE DENS MAT= 15 NUM. POINTS= 1
SLOC= 1 8940.640
Specific Heat (Btu/lb/F converted to J/kg/K)

PROPERTY TABLE C MAT= 15 NUM. POINTS= 1
SLOC= 1 376.7898
Conductivity (Btu/hr/ft/F converted to W/m/K)

TEMPERATURE TABLE ERASED.

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 2 ***
SLOC= 1 20.00000 100.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 4 ***
SLOC= 3 200.0000 300.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 6 ***
SLOC= 5 400.0000 500.0000

*** PROPERTY TEMPERATURE TABLE NUM. TEMPS= 8 ***
SLOC= 7 600.0000 700.0000

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 2
SLOC= 1 29.42190 29.24883

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 4
SLOC= 3 34.09479 38.59461

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 6
SLOC= 5 43.09443 48.11346

PROPERTY TABLE KXX MAT= 15 NUM. POINTS= 8
SLOC= 7 53.13249 58.15152

Construct geometry for Disposal Container

Define center and axis keypoints for waste package
Also, create placeholder keypoints and lines
(K's 1,2,3,4,5,6,7,8)
(L's 1,2,3,4)

KEYPOINT 1 X,Y,Z= .000000E+00 .000000E+00 .000000E+00 IN CSYS= 0
KEYPOINT 2 X,Y,Z= .000000E+00 .000000E+00 1.00000 IN CSYS= 0
KEYPOINT 3 X,Y,Z= .000000E+00 .000000E+00 1.30000 IN CSYS= 0
KEYPOINT 4 X,Y,Z= .000000E+00 .000000E+00 1.40000 IN CSYS= 0
KEYPOINT 5 X,Y,Z= .000000E+00 .000000E+00 1.50000 IN CSYS= 0
KEYPOINT 6 X,Y,Z= .000000E+00 .000000E+00 1.60000 IN CSYS= 0
KEYPOINT 7 X,Y,Z= .000000E+00 .000000E+00 1.70000 IN CSYS= 0
KEYPOINT 8 X,Y,Z= .000000E+00 .000000E+00 1.80000 IN CSYS= 0

LINE CONNECTS KEYPOINTS 3 4
LINE NO.= 1 KP1= 3 TAN1= .0000 .0000 -1.0000
KP2= 4 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 4 5
LINE NO.= 2 KP1= 4 TAN1= .0000 .0000 -1.0000
KP2= 5 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 5 6
LINE NO.= 3 KP1= 5 TAN1= .0000 .0000 -1.0000
KP2= 6 TAN2= .0000 .0000 1.0000

LINE CONNECTS KEYPOINTS 6 7
LINE NO.= 4 KP1= 6 TAN1= .0000 .0000 -1.0000
KP2= 7 TAN2= .0000 .0000 1.0000

Define disposal container outer radius and material interface
(K's 9,10,11,12,13,14)
(L's 5,6,7,8,9,10,11)
(A's 1,2)

KEYPOINT 9 X,Y,Z= .000000E+00 -.763000 .000000E+00 IN CSYS= 0
KEYPOINT 10 X,Y,Z= .763000 .000000E+00 .000000E+00 IN CSYS= 0
KEYPOINT 11 X,Y,Z= .000000E+00 .763000 .000000E+00 IN CSYS= 0

KEYPOINT 12 X,Y,Z= .000000E+00 -.713000 .000000E+00 IN CSYS= 0
 KEYPOINT 13 X,Y,Z= .713000 .000000E+00 .000000E+00 IN CSYS= 0
 KEYPOINT 14 X,Y,Z= .000000E+00 .713000 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 10 13
 LINE NO.= 5 KP1= 10 TAN1= 1.0000 .0000 .0000
 KP2= 13 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 10 AND 9 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 6 KP1= 10 TAN1= .0000 1.0000 .0000
 KP2= 9 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 11 AND 10 ORIENTATION KEYPOINT= 1
 RADIUS= .76300
 LINE NO.= 7 KP1= 11 TAN1= -1.0000 .0000 .0000
 KP2= 10 TAN2= .0000 -1.0000 .0000

ARC BETWEEN KEYPOINTS 13 AND 12 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 8 KP1= 13 TAN1= .0000 1.0000 .0000
 KP2= 12 TAN2= -1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS 14 AND 13 ORIENTATION KEYPOINT= 1
 RADIUS= .71300
 LINE NO.= 9 KP1= 14 TAN1= -1.0000 .0000 .0000
 KP2= 13 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 11 14
 LINE NO.= 10 KP1= 11 TAN1= .0000 1.0000 .0000
 KP2= 14 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 9 12
 LINE NO.= 11 KP1= 9 TAN1= .0000 -1.0000 .0000
 KP2= 12 TAN2= .0000 1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 5 6 11 8
 (TRAVERSED IN SAME DIRECTION AS LINE 5)

AREA NUMBER = 1

DEFINE AREA BY LIST OF LINES
 LINE LIST = 10 7 5 9
 (TRAVERSED IN SAME DIRECTION AS LINE 10)

AREA NUMBER = 2

Define UCF shell inner edge and area
 (K's 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30)
 (31,32,33,34,35)
 (L's 12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27)
 (28,29,30,31,32,33,34)
 (A's 3,4)

KEYPOINT 15 X,Y,Z= .000000E+00 .693000 .000000E+00 IN CSYS= 0
 KEYPOINT 16 X,Y,Z= .100000E-01 .692928 .000000E+00 IN CSYS= 0
 KEYPOINT 17 X,Y,Z= .170000 .671825 .000000E+00 IN CSYS= 0
 KEYPOINT 18 X,Y,Z= .179500 .669349 .000000E+00 IN CSYS= 0
 KEYPOINT 19 X,Y,Z= .480363 .499500 .000000E+00 IN CSYS= 0
 KEYPOINT 20 X,Y,Z= .490025 .490025 .000000E+00 IN CSYS= 0

KEYPOINT	21	X,Y,Z=	.499500	.480363	.000000E+00	IN CSYS= 0
KEYPOINT	22	X,Y,Z=	.669349	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	23	X,Y,Z=	.671825	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	24	X,Y,Z=	.692928	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	25	X,Y,Z=	.693000	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	26	X,Y,Z=	.692928	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	27	X,Y,Z=	.671825	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	28	X,Y,Z=	.669349	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	29	X,Y,Z=	.499500	-.480363	.000000E+00	IN CSYS= 0
KEYPOINT	30	X,Y,Z=	.490025	-.490025	.000000E+00	IN CSYS= 0
KEYPOINT	31	X,Y,Z=	.480363	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	32	X,Y,Z=	.179500	-.669349	.000000E+00	IN CSYS= 0
KEYPOINT	33	X,Y,Z=	.170000	-.671825	.000000E+00	IN CSYS= 0
KEYPOINT	34	X,Y,Z=	.100000E-01	-.692928	.000000E+00	IN CSYS= 0
KEYPOINT	35	X,Y,Z=	.000000E+00	-.693000	.000000E+00	IN CSYS= 0

LINE CONNECTS KEYPOINTS	14	15			
LINE NO.= 12	KP1= 14	TAN1=	.0000	1.0000	.0000
	KP2= 15	TAN2=	.0000	-1.0000	.0000

ARC BETWEEN KEYPOINTS	16 AND 15	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 13	KP1= 16	TAN1=	.9999 -.0144 .0000
	KP2= 15	TAN2=	-1.0000 .0000 .0000

ARC BETWEEN KEYPOINTS	17 AND 16	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 14	KP1= 17	TAN1=	.9694 -.2453 .0000
	KP2= 16	TAN2=	-.9999 .0144 .0000

ARC BETWEEN KEYPOINTS	18 AND 17	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 15	KP1= 18	TAN1=	.9659 -.2590 .0000
	KP2= 17	TAN2=	-.9694 .2453 .0000

ARC BETWEEN KEYPOINTS	19 AND 18	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 16	KP1= 19	TAN1=	.7208 -.6932 .0000
	KP2= 18	TAN2=	-.9659 .2590 .0000

ARC BETWEEN KEYPOINTS	20 AND 19	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 17	KP1= 20	TAN1=	.7071 -.7071 .0000
	KP2= 19	TAN2=	-.7208 .6932 .0000

ARC BETWEEN KEYPOINTS	21 AND 20	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 18	KP1= 21	TAN1=	.6932 -.7208 .0000
	KP2= 20	TAN2=	-.7071 .7071 .0000

ARC BETWEEN KEYPOINTS	22 AND 21	ORIENTATION KEYPOINT=	1
RADIUS=	.69300		
LINE NO.= 19	KP1= 22	TAN1=	.2590 -.9659 .0000
	KP2= 21	TAN2=	-.6932 .7208 .0000

ARC BETWEEN KEYPOINTS	23 AND 22	ORIENTATION KEYPOINT=	1
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RADIUS= .69300						
LINE NO.=	20	KP1=	23	TAN1=	.2453	-.9694 .0000
		KP2=	22	TAN2=	-.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 24 AND 23 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	21	KP1=	24	TAN1=	.0144	-.9999 .0000
		KP2=	23	TAN2=	-.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 25 AND 24 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	22	KP1=	25	TAN1=	.0000	-1.0000 .0000
		KP2=	24	TAN2=	-.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 26 AND 25 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	23	KP1=	26	TAN1=	-.0144	-.9999 .0000
		KP2=	25	TAN2=	.0000	1.0000 .0000
ARC BETWEEN KEYPOINTS 27 AND 26 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	24	KP1=	27	TAN1=	-.2453	-.9694 .0000
		KP2=	26	TAN2=	.0144	.9999 .0000
ARC BETWEEN KEYPOINTS 28 AND 27 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	25	KP1=	28	TAN1=	-.2590	-.9659 .0000
		KP2=	27	TAN2=	.2453	.9694 .0000
ARC BETWEEN KEYPOINTS 29 AND 28 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	26	KP1=	29	TAN1=	-.6932	-.7208 .0000
		KP2=	28	TAN2=	.2590	.9659 .0000
ARC BETWEEN KEYPOINTS 30 AND 29 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	27	KP1=	30	TAN1=	-.7071	-.7071 .0000
		KP2=	29	TAN2=	.6932	.7208 .0000
ARC BETWEEN KEYPOINTS 31 AND 30 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	28	KP1=	31	TAN1=	-.7208	-.6932 .0000
		KP2=	30	TAN2=	.7071	.7071 .0000
ARC BETWEEN KEYPOINTS 32 AND 31 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	29	KP1=	32	TAN1=	-.9659	-.2590 .0000
		KP2=	31	TAN2=	.7208	.6932 .0000
ARC BETWEEN KEYPOINTS 33 AND 32 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	30	KP1=	33	TAN1=	-.9694	-.2453 .0000
		KP2=	32	TAN2=	.9659	.2590 .0000
ARC BETWEEN KEYPOINTS 34 AND 33 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	31	KP1=	34	TAN1=	-.9999	-.0144 .0000
		KP2=	33	TAN2=	.9694	.2453 .0000
ARC BETWEEN KEYPOINTS 35 AND 34 ORIENTATION KEYPOINT= 1						
RADIUS= .69300						
LINE NO.=	32	KP1=	35	TAN1=	-1.0000	.0000 .0000
		KP2=	34	TAN2=	.9999	.0144 .0000
LINE CONNECTS KEYPOINTS 12 35						
LINE NO.=	33	KP1=	12	TAN1=	.0000	-1.0000 .0000
		KP2=	35	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS 25 13						
LINE NO.=	34	KP1=	25	TAN1=	-1.0000	.0000 .0000

KP2= 13 TAN2= 1.0000 .0000 .0000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 12 TO 22 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 9 TO 9 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 9)

AREA NUMBER = 3

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 33 STEP 1

11 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 8 TO 8 STEP 1

12 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 34 TO 34 STEP 1

13 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

DEFINE AREA BY LIST OF LINES
LINE LIST = ALL SELECTED LINES
(TRAVERSED IN SAME DIRECTION AS LINE 8)

AREA NUMBER = 4

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 34 STEP 1

34 LINES (OF 34 DEFINED) SELECTED BY LSEL COMMAND.

Define thermal shunts

(K's 36,37,38,39,40,41,42,43,44,45,46,47,48,49,50)
(51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68)
(L's 35,36,37,38,39,40,41,42,43,44,45,46,47,48,49)
(50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66)
(67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83)
(84,85,86,87,88,89,90,91,92)
(A's 5 - 26)

horizontal thermal shunt

KEYPOINT	36	X,Y,Z=	.000000E+00	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	37	X,Y,Z=	.000000E+00	.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	38	X,Y,Z=	.100000E-01	-.100000E-01	.000000E+00	IN CSYS= 0
KEYPOINT	39	X,Y,Z=	.100000E-01	.000000E+00	.000000E+00	IN CSYS= 0
KEYPOINT	40	X,Y,Z=	.100000E-01	.100000E-01	.000000E+00	IN CSYS= 0

KEYPOINT	41	X,Y,Z=	.170000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	42	X,Y,Z=	.170000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	43	X,Y,Z=	.170000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	44	X,Y,Z=	.330000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	45	X,Y,Z=	.330000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	46	X,Y,Z=	.330000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	47	X,Y,Z=	.490000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	48	X,Y,Z=	.490000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	49	X,Y,Z=	.490000	.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	50	X,Y,Z=	.650000	-.100000E-01	.000000E+00	IN CSYS=	0
KEYPOINT	51	X,Y,Z=	.650000	.000000E+00	.000000E+00	IN CSYS=	0
KEYPOINT	52	X,Y,Z=	.650000	.100000E-01	.000000E+00	IN CSYS=	0
		vertical thermal shunt					
KEYPOINT	53	X,Y,Z=	.000000E+00	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	54	X,Y,Z=	.100000E-01	.650000	.000000E+00	IN CSYS=	0
KEYPOINT	55	X,Y,Z=	.000000E+00	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	56	X,Y,Z=	.100000E-01	.490000	.000000E+00	IN CSYS=	0
KEYPOINT	57	X,Y,Z=	.000000E+00	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	58	X,Y,Z=	.100000E-01	.330000	.000000E+00	IN CSYS=	0
KEYPOINT	59	X,Y,Z=	.000000E+00	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	60	X,Y,Z=	.100000E-01	.170000	.000000E+00	IN CSYS=	0
KEYPOINT	61	X,Y,Z=	.000000E+00	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	62	X,Y,Z=	.100000E-01	-.170000	.000000E+00	IN CSYS=	0
KEYPOINT	63	X,Y,Z=	.000000E+00	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	64	X,Y,Z=	.100000E-01	-.330000	.000000E+00	IN CSYS=	0
KEYPOINT	65	X,Y,Z=	.000000E+00	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	66	X,Y,Z=	.100000E-01	-.490000	.000000E+00	IN CSYS=	0
KEYPOINT	67	X,Y,Z=	.000000E+00	-.650000	.000000E+00	IN CSYS=	0
KEYPOINT	68	X,Y,Z=	.100000E-01	-.650000	.000000E+00	IN CSYS=	0
		Lines; shunt widths, horizontal then vertical: (35-57)					

LINE CONNECTS KEYPOINTS	36	1			
LINE NO.=	35	KP1=	36	TAN1=	.0000 -1.0000 .0000
		KP2=	1	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	1	37			
LINE NO.=	36	KP1=	1	TAN1=	.0000 -1.0000 .0000
		KP2=	37	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS	38	39			
LINE NO.=	37	KP1=	38	TAN1=	.0000 -1.0000 .0000
		KP2=	39	TAN2=	.0000 1.0000 .0000

LINE CONNECTS KEYPOINTS		39	40			
LINE NO.=	38	KP1=	39	TAN1=	.0000	-1.0000 .0000
		KP2=	40	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		41	42			
LINE NO.=	39	KP1=	41	TAN1=	.0000	-1.0000 .0000
		KP2=	42	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		42	43			
LINE NO.=	40	KP1=	42	TAN1=	.0000	-1.0000 .0000
		KP2=	43	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		44	45			
LINE NO.=	41	KP1=	44	TAN1=	.0000	-1.0000 .0000
		KP2=	45	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		45	46			
LINE NO.=	42	KP1=	45	TAN1=	.0000	-1.0000 .0000
		KP2=	46	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		47	48			
LINE NO.=	43	KP1=	47	TAN1=	.0000	-1.0000 .0000
		KP2=	48	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		48	49			
LINE NO.=	44	KP1=	48	TAN1=	.0000	-1.0000 .0000
		KP2=	49	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		50	51			
LINE NO.=	45	KP1=	50	TAN1=	.0000	-1.0000 .0000
		KP2=	51	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		51	52			
LINE NO.=	46	KP1=	51	TAN1=	.0000	-1.0000 .0000
		KP2=	52	TAN2=	.0000	1.0000 .0000
LINE CONNECTS KEYPOINTS		53	54			
LINE NO.=	47	KP1=	53	TAN1=	-1.0000	.0000 .0000
		KP2=	54	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		55	56			
LINE NO.=	48	KP1=	55	TAN1=	-1.0000	.0000 .0000
		KP2=	56	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		57	58			
LINE NO.=	49	KP1=	57	TAN1=	-1.0000	.0000 .0000
		KP2=	58	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		59	60			
LINE NO.=	50	KP1=	59	TAN1=	-1.0000	.0000 .0000
		KP2=	60	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		37	40			
LINE NO.=	51	KP1=	37	TAN1=	-1.0000	.0000 .0000
		KP2=	40	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		1	39			
LINE NO.=	52	KP1=	1	TAN1=	-1.0000	.0000 .0000
		KP2=	39	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		36	38			
LINE NO.=	53	KP1=	36	TAN1=	-1.0000	.0000 .0000
		KP2=	38	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		61	62			
LINE NO.=	54	KP1=	61	TAN1=	-1.0000	.0000 .0000
		KP2=	62	TAN2=	1.0000	.0000 .0000
LINE CONNECTS KEYPOINTS		63	64			
LINE NO.=	55	KP1=	63	TAN1=	-1.0000	.0000 .0000

	KP2=	64	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		65	66			
LINE NO.= 56	KP1=	65	TAN1=	-1.0000	.0000	.0000
	KP2=	66	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		67	68			
LINE NO.= 57	KP1=	67	TAN1=	-1.0000	.0000	.0000
	KP2=	68	TAN2=	1.0000	.0000	.0000
Lines; shunt edges, horizontal then vertical: (58-92)						
LINE CONNECTS KEYPOINTS		38	41			
LINE NO.= 58	KP1=	38	TAN1=	-1.0000	.0000	.0000
	KP2=	41	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		39	42			
LINE NO.= 59	KP1=	39	TAN1=	-1.0000	.0000	.0000
	KP2=	42	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		40	43			
LINE NO.= 60	KP1=	40	TAN1=	-1.0000	.0000	.0000
	KP2=	43	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		41	44			
LINE NO.= 61	KP1=	41	TAN1=	-1.0000	.0000	.0000
	KP2=	44	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		42	45			
LINE NO.= 62	KP1=	42	TAN1=	-1.0000	.0000	.0000
	KP2=	45	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		43	46			
LINE NO.= 63	KP1=	43	TAN1=	-1.0000	.0000	.0000
	KP2=	46	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		44	47			
LINE NO.= 64	KP1=	44	TAN1=	-1.0000	.0000	.0000
	KP2=	47	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		45	48			
LINE NO.= 65	KP1=	45	TAN1=	-1.0000	.0000	.0000
	KP2=	48	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		46	49			
LINE NO.= 66	KP1=	46	TAN1=	-1.0000	.0000	.0000
	KP2=	49	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		47	50			
LINE NO.= 67	KP1=	47	TAN1=	-1.0000	.0000	.0000
	KP2=	50	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		48	51			
LINE NO.= 68	KP1=	48	TAN1=	-1.0000	.0000	.0000
	KP2=	51	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		49	52			
LINE NO.= 69	KP1=	49	TAN1=	-1.0000	.0000	.0000
	KP2=	52	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		26	50			
LINE NO.= 70	KP1=	26	TAN1=	1.0000	.0000	.0000
	KP2=	50	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		25	51			
LINE NO.= 71	KP1=	25	TAN1=	1.0000	.0000	.0000
	KP2=	51	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS		52	24			
LINE NO.= 72	KP1=	52	TAN1=	-1.0000	.0000	.0000
	KP2=	24	TAN2=	1.0000	.0000	.0000

LINE CONNECTS KEYPOINTS	15	53			
LINE NO.= 73 KP1=	15	TAN1=	.0000	1.0000	.0000
KP2= 53	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	16	54			
LINE NO.= 74 KP1=	16	TAN1=	.0000	1.0000	.0000
KP2= 54	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	53	55			
LINE NO.= 75 KP1=	53	TAN1=	.0000	1.0000	.0000
KP2= 55	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	54	56			
LINE NO.= 76 KP1=	54	TAN1=	.0000	1.0000	.0000
KP2= 56	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	55	57			
LINE NO.= 77 KP1=	55	TAN1=	.0000	1.0000	.0000
KP2= 57	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	56	58			
LINE NO.= 78 KP1=	56	TAN1=	.0000	1.0000	.0000
KP2= 58	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	57	59			
LINE NO.= 79 KP1=	57	TAN1=	.0000	1.0000	.0000
KP2= 59	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	58	60			
LINE NO.= 80 KP1=	58	TAN1=	.0000	1.0000	.0000
KP2= 60	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	59	37			
LINE NO.= 81 KP1=	59	TAN1=	.0000	1.0000	.0000
KP2= 37	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	60	40			
LINE NO.= 82 KP1=	60	TAN1=	.0000	1.0000	.0000
KP2= 40	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	36	61			
LINE NO.= 83 KP1=	36	TAN1=	.0000	1.0000	.0000
KP2= 61	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	38	62			
LINE NO.= 84 KP1=	38	TAN1=	.0000	1.0000	.0000
KP2= 62	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	61	63			
LINE NO.= 85 KP1=	61	TAN1=	.0000	1.0000	.0000
KP2= 63	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	62	64			
LINE NO.= 86 KP1=	62	TAN1=	.0000	1.0000	.0000
KP2= 64	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	63	65			
LINE NO.= 87 KP1=	63	TAN1=	.0000	1.0000	.0000
KP2= 65	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	64	66			
LINE NO.= 88 KP1=	64	TAN1=	.0000	1.0000	.0000
KP2= 66	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	65	67			
LINE NO.= 89 KP1=	65	TAN1=	.0000	1.0000	.0000
KP2= 67	TAN2=	.0000	-1.0000	.0000	
LINE CONNECTS KEYPOINTS	66	68			

LINE NO.= 90 KP1= 66 TAN1= .0000 1.0000 .0000
 KP2= 68 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 67 35
 LINE NO.= 91 KP1= 67 TAN1= .0000 1.0000 .0000
 KP2= 35 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 68 34
 LINE NO.= 92 KP1= 68 TAN1= .0000 1.0000 .0000
 KP2= 34 TAN2= .0000 -1.0000 .0000

define areas for thermal shunts

DEFINE AREA BY LIST OF LINES

LINE LIST = 35 53 37 52
 (TRAVERSED IN SAME DIRECTION AS LINE 35)

AREA NUMBER = 5

DEFINE AREA BY LIST OF LINES

LINE LIST = 36 52 38 51
 (TRAVERSED IN SAME DIRECTION AS LINE 36)

AREA NUMBER = 6

DEFINE AREA BY LIST OF LINES

LINE LIST = 37 58 39 59
 (TRAVERSED IN SAME DIRECTION AS LINE 37)

AREA NUMBER = 7

DEFINE AREA BY LIST OF LINES

LINE LIST = 38 59 40 60
 (TRAVERSED IN SAME DIRECTION AS LINE 38)

AREA NUMBER = 8

DEFINE AREA BY LIST OF LINES

LINE LIST = 39 61 41 62
 (TRAVERSED IN SAME DIRECTION AS LINE 39)

AREA NUMBER = 9

DEFINE AREA BY LIST OF LINES

LINE LIST = 40 62 42 63
 (TRAVERSED IN SAME DIRECTION AS LINE 40)

AREA NUMBER = 10

DEFINE AREA BY LIST OF LINES

LINE LIST = 41 64 43 65
 (TRAVERSED IN SAME DIRECTION AS LINE 41)

AREA NUMBER = 11

DEFINE AREA BY LIST OF LINES

LINE LIST = 42 65 44 66
 (TRAVERSED IN SAME DIRECTION AS LINE 42)

AREA NUMBER = 12

DEFINE AREA BY LIST OF LINES

LINE LIST = 43 67 45 68
 (TRAVERSED IN SAME DIRECTION AS LINE 43)

AREA NUMBER = 13

DEFINE AREA BY LIST OF LINES

LINE LIST = 44 68 46 69
 (TRAVERSED IN SAME DIRECTION AS LINE 44)

AREA NUMBER = 14

DEFINE AREA BY LIST OF LINES
LINE LIST = 45 70 23 71
(TRAVERSED IN SAME DIRECTION AS LINE 45)

AREA NUMBER = 15

DEFINE AREA BY LIST OF LINES
LINE LIST = 46 71 22 72
(TRAVERSED IN SAME DIRECTION AS LINE 46)

AREA NUMBER = 16

DEFINE AREA BY LIST OF LINES
LINE LIST = 73 47 74 13
(TRAVERSED IN SAME DIRECTION AS LINE 73)

AREA NUMBER = 17

DEFINE AREA BY LIST OF LINES
LINE LIST = 75 48 76 47
(TRAVERSED IN SAME DIRECTION AS LINE 75)

AREA NUMBER = 18

DEFINE AREA BY LIST OF LINES
LINE LIST = 77 49 78 48
(TRAVERSED IN SAME DIRECTION AS LINE 77)

AREA NUMBER = 19

DEFINE AREA BY LIST OF LINES
LINE LIST = 79 50 80 49
(TRAVERSED IN SAME DIRECTION AS LINE 79)

AREA NUMBER = 20

DEFINE AREA BY LIST OF LINES
LINE LIST = 81 51 82 50
(TRAVERSED IN SAME DIRECTION AS LINE 81)

AREA NUMBER = 21

DEFINE AREA BY LIST OF LINES
LINE LIST = 83 54 84 53
(TRAVERSED IN SAME DIRECTION AS LINE 83)

AREA NUMBER = 22

DEFINE AREA BY LIST OF LINES
LINE LIST = 85 55 86 54
(TRAVERSED IN SAME DIRECTION AS LINE 85)

AREA NUMBER = 23

DEFINE AREA BY LIST OF LINES
LINE LIST = 87 56 88 55
(TRAVERSED IN SAME DIRECTION AS LINE 87)

AREA NUMBER = 24

DEFINE AREA BY LIST OF LINES
LINE LIST = 89 57 90 56
(TRAVERSED IN SAME DIRECTION AS LINE 89)

AREA NUMBER = 25

DEFINE AREA BY LIST OF LINES
LINE LIST = 91 32 92 57

(TRAVERSED IN SAME DIRECTION AS LINE 91)

AREA NUMBER = 26

Define tube guides

(K's 69 - 92)

(L's 93 - 136)

(A's 27 - 46)

top guide

KEYPOINT	69	X,Y,Z=	.170000	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	70	X,Y,Z=	.179500	.650000	.000000E+00	IN CSYS= 0
KEYPOINT	71	X,Y,Z=	.170000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	72	X,Y,Z=	.179500	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	73	X,Y,Z=	.330000	.490000	.000000E+00	IN CSYS= 0
KEYPOINT	74	X,Y,Z=	.330000	.499500	.000000E+00	IN CSYS= 0
KEYPOINT	75	X,Y,Z=	.490000	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	76	X,Y,Z=	.499500	.330000	.000000E+00	IN CSYS= 0
KEYPOINT	77	X,Y,Z=	.490000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	78	X,Y,Z=	.499500	.179500	.000000E+00	IN CSYS= 0
KEYPOINT	79	X,Y,Z=	.650000	.170000	.000000E+00	IN CSYS= 0
KEYPOINT	80	X,Y,Z=	.650000	.179500	.000000E+00	IN CSYS= 0
		bottom guide				
KEYPOINT	81	X,Y,Z=	.650000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	82	X,Y,Z=	.650000	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	83	X,Y,Z=	.490000	-.170000	.000000E+00	IN CSYS= 0
KEYPOINT	84	X,Y,Z=	.499500	-.179500	.000000E+00	IN CSYS= 0
KEYPOINT	85	X,Y,Z=	.490000	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	86	X,Y,Z=	.499500	-.330000	.000000E+00	IN CSYS= 0
KEYPOINT	87	X,Y,Z=	.330000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	88	X,Y,Z=	.330000	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	89	X,Y,Z=	.170000	-.490000	.000000E+00	IN CSYS= 0
KEYPOINT	90	X,Y,Z=	.179500	-.499500	.000000E+00	IN CSYS= 0
KEYPOINT	91	X,Y,Z=	.170000	-.650000	.000000E+00	IN CSYS= 0
KEYPOINT	92	X,Y,Z=	.179500	-.650000	.000000E+00	IN CSYS= 0

top guide

LINE CONNECTS KEYPOINTS	69	17			
LINE NO.= 93	KP1=	69	TAN1=	.0000	-1.0000
	KP2=	17	TAN2=	.0000	1.0000
				.0000	.0000
LINE CONNECTS KEYPOINTS	18	70			
LINE NO.= 94	KP1=	18	TAN1=	.0000	1.0000
	KP2=	70	TAN2=	.0000	-1.0000
				.0000	.0000

LINE CONNECTS KEYPOINTS	71	69			
LINE NO.= 95 KP1=	71	TAN1=	.0000	-1.0000	.0000
KP2=	69	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	70	72			
LINE NO.= 96 KP1=	70	TAN1=	.0000	1.0000	.0000
KP2=	72	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	73	71			
LINE NO.= 97 KP1=	73	TAN1=	1.0000	.0000	.0000
KP2=	71	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	72	74			
LINE NO.= 98 KP1=	72	TAN1=	-1.0000	.0000	.0000
KP2=	74	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	20	73			
LINE NO.= 99 KP1=	20	TAN1=	1.0000	.0002	.0000
KP2=	73	TAN2=	-1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS	74	19			
LINE NO.= 100 KP1=	74	TAN1=	-1.0000	.0000	.0000
KP2=	19	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	75	20			
LINE NO.= 101 KP1=	75	TAN1=	-.0002	-1.0000	.0000
KP2=	20	TAN2=	.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS	21	76			
LINE NO.= 102 KP1=	21	TAN1=	.0000	1.0000	.0000
KP2=	76	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	77	75			
LINE NO.= 103 KP1=	77	TAN1=	.0000	-1.0000	.0000
KP2=	75	TAN2=	.0000	1.0000	.0000
LINE CONNECTS KEYPOINTS	76	78			
LINE NO.= 104 KP1=	76	TAN1=	.0000	1.0000	.0000
KP2=	78	TAN2=	.0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS	79	77			
LINE NO.= 105 KP1=	79	TAN1=	1.0000	.0000	.0000
KP2=	77	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	78	80			
LINE NO.= 106 KP1=	78	TAN1=	-1.0000	.0000	.0000
KP2=	80	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	23	79			
LINE NO.= 107 KP1=	23	TAN1=	1.0000	.0000	.0000
KP2=	79	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	80	22			
LINE NO.= 108 KP1=	80	TAN1=	-1.0000	.0000	.0000
KP2=	22	TAN2=	1.0000	.0000	.0000
bottom guide					
LINE CONNECTS KEYPOINTS	81	27			
LINE NO.= 109 KP1=	81	TAN1=	-1.0000	.0000	.0000
KP2=	27	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	28	82			
LINE NO.= 110 KP1=	28	TAN1=	1.0000	.0000	.0000
KP2=	82	TAN2=	-1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	83	81			
LINE NO.= 111 KP1=	83	TAN1=	-1.0000	.0000	.0000
KP2=	81	TAN2=	1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS	82	84			

LINE NO.= 112	KP1= 82	TAN1= 1.0000	.0000	.0000
	KP2= 84	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 85 83				
LINE NO.= 113	KP1= 85	TAN1= .0000	-1.0000	.0000
	KP2= 83	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 84 86				
LINE NO.= 114	KP1= 84	TAN1= .0000	1.0000	.0000
	KP2= 86	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 30 85				
LINE NO.= 115	KP1= 30	TAN1= .0002	-1.0000	.0000
	KP2= 85	TAN2= -.0002	1.0000	.0000
LINE CONNECTS KEYPOINTS 86 29				
LINE NO.= 116	KP1= 86	TAN1= .0000	1.0000	.0000
	KP2= 29	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 87 30				
LINE NO.= 117	KP1= 87	TAN1= -1.0000	.0002	.0000
	KP2= 30	TAN2= 1.0000	-.0002	.0000
LINE CONNECTS KEYPOINTS 31 88				
LINE NO.= 118	KP1= 31	TAN1= 1.0000	.0000	.0000
	KP2= 88	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 89 87				
LINE NO.= 119	KP1= 89	TAN1= -1.0000	.0000	.0000
	KP2= 87	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 88 90				
LINE NO.= 120	KP1= 88	TAN1= 1.0000	.0000	.0000
	KP2= 90	TAN2= -1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 91 89				
LINE NO.= 121	KP1= 91	TAN1= .0000	-1.0000	.0000
	KP2= 89	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 90 92				
LINE NO.= 122	KP1= 90	TAN1= .0000	1.0000	.0000
	KP2= 92	TAN2= .0000	-1.0000	.0000
LINE CONNECTS KEYPOINTS 33 91				
LINE NO.= 123	KP1= 33	TAN1= .0000	-1.0000	.0000
	KP2= 91	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 92 32				
LINE NO.= 124	KP1= 92	TAN1= .0000	1.0000	.0000
	KP2= 32	TAN2= .0000	-1.0000	.0000
Guide thickness lines				
LINE CONNECTS KEYPOINTS 69 70				
LINE NO.= 125	KP1= 69	TAN1= -1.0000	.0000	.0000
	KP2= 70	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 71 72				
LINE NO.= 126	KP1= 71	TAN1= -.7071	-.7071	.0000
	KP2= 72	TAN2= .7071	.7071	.0000
LINE CONNECTS KEYPOINTS 73 74				
LINE NO.= 127	KP1= 73	TAN1= .0000	-1.0000	.0000
	KP2= 74	TAN2= .0000	1.0000	.0000
LINE CONNECTS KEYPOINTS 75 76				
LINE NO.= 128	KP1= 75	TAN1= -1.0000	.0000	.0000
	KP2= 76	TAN2= 1.0000	.0000	.0000
LINE CONNECTS KEYPOINTS 77 78				
LINE NO.= 129	KP1= 77	TAN1= -.7071	-.7071	.0000

	KP2=	78	TAN2=	.7071	.7071	.0000
LINE CONNECTS KEYPOINTS 79 80						
LINE NO.=	130	KP1=	79	TAN1=	.0000	-1.0000
		KP2=	80	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 82 81						
LINE NO.=	131	KP1=	82	TAN1=	.0000	-1.0000
		KP2=	81	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 84 83						
LINE NO.=	132	KP1=	84	TAN1=	.7071	-.7071
		KP2=	83	TAN2=	-.7071	.7071
LINE CONNECTS KEYPOINTS 86 85						
LINE NO.=	133	KP1=	86	TAN1=	1.0000	.0000
		KP2=	85	TAN2=	-1.0000	.0000
LINE CONNECTS KEYPOINTS 88 87						
LINE NO.=	134	KP1=	88	TAN1=	.0000	-1.0000
		KP2=	87	TAN2=	.0000	1.0000
LINE CONNECTS KEYPOINTS 90 89						
LINE NO.=	135	KP1=	90	TAN1=	.7071	-.7071
		KP2=	89	TAN2=	-.7071	.7071
LINE CONNECTS KEYPOINTS 92 91						
LINE NO.=	136	KP1=	92	TAN1=	1.0000	.0000
		KP2=	91	TAN2=	-1.0000	.0000

Guide steel

DEFINE AREA BY LIST OF LINES

LINE LIST = 93 125 94 15
(TRAVERSED IN SAME DIRECTION AS LINE 93)

AREA NUMBER = 27

DEFINE AREA BY LIST OF LINES

LINE LIST = 95 126 96 125
(TRAVERSED IN SAME DIRECTION AS LINE 95)

AREA NUMBER = 28

DEFINE AREA BY LIST OF LINES

LINE LIST = 97 127 98 126
(TRAVERSED IN SAME DIRECTION AS LINE 97)

AREA NUMBER = 29

DEFINE AREA BY LIST OF LINES

LINE LIST = 99 17 100 127
(TRAVERSED IN SAME DIRECTION AS LINE 99)

AREA NUMBER = 30

DEFINE AREA BY LIST OF LINES

LINE LIST = 101 128 102 18
(TRAVERSED IN SAME DIRECTION AS LINE 101)

AREA NUMBER = 31

DEFINE AREA BY LIST OF LINES

LINE LIST = 103 129 104 128
(TRAVERSED IN SAME DIRECTION AS LINE 103)

AREA NUMBER = 32

DEFINE AREA BY LIST OF LINES

LINE LIST = 105 130 106 129
(TRAVERSED IN SAME DIRECTION AS LINE 105)

AREA NUMBER = 33

DEFINE AREA BY LIST OF LINES

LINE LIST = 107 20 108 130
(TRAVERSED IN SAME DIRECTION AS LINE 107)

AREA NUMBER = 34

DEFINE AREA BY LIST OF LINES

LINE LIST = 109 131 110 25
(TRAVERSED IN SAME DIRECTION AS LINE 109)

AREA NUMBER = 35

DEFINE AREA BY LIST OF LINES

LINE LIST = 111 132 112 131
(TRAVERSED IN SAME DIRECTION AS LINE 111)

AREA NUMBER = 36

DEFINE AREA BY LIST OF LINES

LINE LIST = 113 133 114 132
(TRAVERSED IN SAME DIRECTION AS LINE 113)

AREA NUMBER = 37

DEFINE AREA BY LIST OF LINES

LINE LIST = 115 27 116 133
(TRAVERSED IN SAME DIRECTION AS LINE 115)

AREA NUMBER = 38

DEFINE AREA BY LIST OF LINES

LINE LIST = 117 134 118 28
(TRAVERSED IN SAME DIRECTION AS LINE 117)

AREA NUMBER = 39

DEFINE AREA BY LIST OF LINES

LINE LIST = 119 135 120 134
(TRAVERSED IN SAME DIRECTION AS LINE 119)

AREA NUMBER = 40

DEFINE AREA BY LIST OF LINES

LINE LIST = 121 136 122 135
(TRAVERSED IN SAME DIRECTION AS LINE 121)

AREA NUMBER = 41

DEFINE AREA BY LIST OF LINES

LINE LIST = 123 30 124 136
(TRAVERSED IN SAME DIRECTION AS LINE 123)

AREA NUMBER = 42

Guide gaps

DEFINE AREA BY LIST OF LINES

LINE LIST = 16 94 96 98 100
(TRAVERSED IN SAME DIRECTION AS LINE 16)

AREA NUMBER = 43

DEFINE AREA BY LIST OF LINES

LINE LIST = 19 102 104 106 108
(TRAVERSED IN SAME DIRECTION AS LINE 19)

AREA NUMBER = 44

DEFINE AREA BY LIST OF LINES

LINE LIST = 26 110 112 114 116
(TRAVERSED IN SAME DIRECTION AS LINE 26)

AREA NUMBER = 45

DEFINE AREA BY LIST OF LINES

LINE LIST = 29 118 120 122 124
(TRAVERSED IN SAME DIRECTION AS LINE 29)

AREA NUMBER = 46

Define shell gaps at the exterior of the tube array
(L's 137 - 140)
(A's 47 - 50)

LINE CONNECTS KEYPOINTS 54 69
LINE NO.= 137 KP1= 54 TAN1= -1.0000 .0000 .0000
KP2= 69 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 79 52
LINE NO.= 138 KP1= 79 TAN1= .0000 1.0000 .0000
KP2= 52 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 50 81
LINE NO.= 139 KP1= 50 TAN1= .0000 1.0000 .0000
KP2= 81 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 91 68
LINE NO.= 140 KP1= 91 TAN1= 1.0000 .0000 .0000
KP2= 68 TAN2= -1.0000 .0000 .0000

DEFINE AREA BY LIST OF LINES

LINE LIST = 14 74 137 93
(TRAVERSED IN SAME DIRECTION AS LINE 14)

AREA NUMBER = 47

DEFINE AREA BY LIST OF LINES

LINE LIST = 21 107 138 72
(TRAVERSED IN SAME DIRECTION AS LINE 21)

AREA NUMBER = 48

DEFINE AREA BY LIST OF LINES

LINE LIST = 24 70 139 109
(TRAVERSED IN SAME DIRECTION AS LINE 24)

AREA NUMBER = 49

DEFINE AREA BY LIST OF LINES

LINE LIST = 31 123 140 92
(TRAVERSED IN SAME DIRECTION AS LINE 31)

AREA NUMBER = 50

Define center full-tube
(K's 93 - 100)
(L's 141 - 152)
(A's 51 - 56)

KEYPOINT 93 X,Y,Z= .100000E-01 .100000E-01 .000000E+00 IN CSYS= 0
KEYPOINT 94 X,Y,Z= .100000E-01 .170000 .000000E+00 IN CSYS= 0
KEYPOINT 95 X,Y,Z= .170000 .170000 .000000E+00 IN CSYS= 0
KEYPOINT 96 X,Y,Z= 170000 .100000E-01 .000000E+00 IN CSYS= 0

KEYPOINT 97 X,Y,Z= .135000E-01 .135000E-01 .000000E+00 IN CSYS= 0
 KEYPOINT 98 X,Y,Z= .135000E-01 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 99 X,Y,Z= .166500 .166500 .000000E+00 IN CSYS= 0
 KEYPOINT 100 X,Y,Z= .166500 .135000E-01 .000000E+00 IN CSYS= 0

LINE CONNECTS KEYPOINTS 93 97
 LINE NO.= 141 KP1= 93 TAN1= -.7071 -.7071 .0000
 KP2= 97 TAN2= .7071 .7071 .0000

LINE CONNECTS KEYPOINTS 94 98
 LINE NO.= 142 KP1= 94 TAN1= -.7071 .7071 .0000
 KP2= 98 TAN2= .7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 100
 LINE NO.= 143 KP1= 96 TAN1= .7071 -.7071 .0000
 KP2= 100 TAN2= -.7071 .7071 .0000

LINE CONNECTS KEYPOINTS 95 99
 LINE NO.= 144 KP1= 95 TAN1= .7071 .7071 .0000
 KP2= 99 TAN2= -.7071 -.7071 .0000

LINE CONNECTS KEYPOINTS 96 93
 LINE NO.= 145 KP1= 96 TAN1= 1.0000 .0000 .0000
 KP2= 93 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 100 97
 LINE NO.= 146 KP1= 100 TAN1= 1.0000 .0000 .0000
 KP2= 97 TAN2= -1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 98 99
 LINE NO.= 147 KP1= 98 TAN1= -1.0000 .0000 .0000
 KP2= 99 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 94 95
 LINE NO.= 148 KP1= 94 TAN1= -1.0000 .0000 .0000
 KP2= 95 TAN2= 1.0000 .0000 .0000

LINE CONNECTS KEYPOINTS 93 94
 LINE NO.= 149 KP1= 93 TAN1= .0000 -1.0000 .0000
 KP2= 94 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 97 98
 LINE NO.= 150 KP1= 97 TAN1= .0000 -1.0000 .0000
 KP2= 98 TAN2= .0000 1.0000 .0000

LINE CONNECTS KEYPOINTS 99 100
 LINE NO.= 151 KP1= 99 TAN1= .0000 1.0000 .0000
 KP2= 100 TAN2= .0000 -1.0000 .0000

LINE CONNECTS KEYPOINTS 95 96
 LINE NO.= 152 KP1= 95 TAN1= .0000 1.0000 .0000
 KP2= 96 TAN2= .0000 -1.0000 .0000

DEFINE AREA BY LIST OF LINES
 LINE LIST = 149 141 150 142
 (TRAVERSED IN SAME DIRECTION AS LINE 149)

AREA NUMBER = 51

DEFINE AREA BY LIST OF LINES
 LINE LIST = 145 143 146 141
 (TRAVERSED IN SAME DIRECTION AS LINE 145)

AREA NUMBER = 52

DEFINE AREA BY LIST OF LINES

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LINE LIST = 152 144 151 143
(TRAVERSED IN SAME DIRECTION AS LINE 152)

AREA NUMBER = 53

DEFINE AREA BY LIST OF LINES
LINE LIST = 148 142 147 144
(TRAVERSED IN SAME DIRECTION AS LINE 148)

AREA NUMBER = 54

DEFINE AREA BY LIST OF LINES
LINE LIST = 150 146 151 147
(TRAVERSED IN SAME DIRECTION AS LINE 150)

AREA NUMBER = 55
*****
Set element shapes and sizes for tubes.
8x8 mesh in fuel with 2
divisions per tube layer

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 145 TO 152 STEP 1

8 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 141 TO 144 STEP 1

4 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 152 STEP 1

152 LINES (OF 152 DEFINED) SELECTED BY LSEL COMMAND.

Mesh areas
first fuel, then stainless tybes

MATERIAL NUMBER SET TO 14

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 55 TO 55 IN STEPS OF 1

NUMBER OF AREAS MESHED = 1
MAXIMUM NODE NUMBER = 81
MAXIMUM ELEMENT NUMBER = 64

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 51 TO 54 IN STEPS OF 1

NUMBER OF AREAS MESHED = 4
MAXIMUM NODE NUMBER = 145

```

MAXIMUM ELEMENT NUMBER = 128

Copy tube mesh

center full tube side, above, and below
 (A's 56 - 60 = Side 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .160 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 290
 MAXIMUM ELEMENT NUMBER = 256
 (A's 61 - 65 = Side 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .320 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 435
 MAXIMUM ELEMENT NUMBER = 384
 (A's 66 - 70 = Side 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .480 .000E+00 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 580
 MAXIMUM ELEMENT NUMBER = 512

(A's 71 - 75 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 725
 MAXIMUM ELEMENT NUMBER = 640
 (A's 76 - 80 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 870
 MAXIMUM ELEMENT NUMBER = 768
 (A's 81 - 85 = up 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .480 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1015
 MAXIMUM ELEMENT NUMBER = 896

(A's 86 - 90 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1160
 MAXIMUM ELEMENT NUMBER = 1024
 (A's 91 - 95 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 51 TO 55 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1305

MAXIMUM ELEMENT NUMBER = 1152
(A's 96 - 100 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1450
MAXIMUM ELEMENT NUMBER = 1280
(A's 101 - 105 = down 4)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 51 TO 55 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.660 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1595
MAXIMUM ELEMENT NUMBER = 1408

(A's 106 - 110 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1740
MAXIMUM ELEMENT NUMBER = 1536
(A's 111 - 115 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 1885
MAXIMUM ELEMENT NUMBER = 1664

(A's 116 - 120 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2030
MAXIMUM ELEMENT NUMBER = 1792
(A's 121 - 125 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2175
MAXIMUM ELEMENT NUMBER = 1920
(A's 126 - 130 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 56 TO 60 IN STEPS OF 1
DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2320
MAXIMUM ELEMENT NUMBER = 2048

(A's 131 - 135 = up 1)

GENERATE 2 TOTAL SETS OF AREAS
SET IS FROM 61 TO 65 IN STEPS OF 1
DX,DY,DZ= .000E+00 .160 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2465
MAXIMUM ELEMENT NUMBER = 2176
(A's 136 - 140 = up 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 .320 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2610
 MAXIMUM ELEMENT NUMBER = 2304

(A's 141 - 145 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2755
 MAXIMUM ELEMENT NUMBER = 2432
 (A's 146 - 150 = down 2)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.340 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 2900
 MAXIMUM ELEMENT NUMBER = 2560
 (A's 151 - 155 = down 3)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 61 TO 65 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.500 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3045
 MAXIMUM ELEMENT NUMBER = 2688

(A's 156 - 160 = down 1)

GENERATE 2 TOTAL SETS OF AREAS
 SET IS FROM 66 TO 70 IN STEPS OF 1
 DX,DY,DZ= .000E+00 -.180 .000E+00 CSYS= 0

MAXIMUM NODE NUMBER = 3190
 MAXIMUM ELEMENT NUMBER = 2816

Create mesh in tube guides, thermal shunts
 Set mesh size for gaps.....

DEFAULT ELEMENT DIVISIONS PER LINE = 2

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 35 TO 57 STEP 1

23 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 125 TO 136 STEP 1

35 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 13 TO 15 STEP 2

37 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 17 TO 18 STEP 1

39 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 20 TO 22 STEP 2

41 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 23 TO 25 STEP 2

43 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 27 TO 28 STEP 1

45 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 30 TO 32 STEP 2

47 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 2, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 70 TO 74 STEP 1

5 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 91 TO 94 STEP 1

9 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 107 TO 110 STEP 1

13 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 123 TO 124 STEP 1

15 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 3, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 14 TO 21 STEP 7

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 24 TO 31 STEP 7

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 58 TO 69 STEP 1

16 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 75 TO 90 STEP 1

32 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 95 TO 106 STEP 1

44 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 111 TO 122 STEP 1

56 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 137 TO 140 STEP 1

60 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 8, SPACING RATIO = 1.000

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 16 TO 19 STEP 3

2 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 26 TO 29 STEP 3

4 LINES (OF 404 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
TO NDIV = 16, SPACING RATIO = 1.000
MESH CORNER GUIDES

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 27 TO 42 IN STEPS OF 1

*** WARNING *** CP= 11.270 TIME= 20:47:19
Area 30 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.310 TIME= 20:47:19
Area 31 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.580 TIME= 20:47:20
Area 38 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

*** WARNING *** CP= 11.620 TIME= 20:47:20
Area 39 has a corner angle of 136 degrees. This is not recommended for
quadrilateral elements.

NUMBER OF AREAS MESHED = 16
MAXIMUM NODE NUMBER = 3524
MAXIMUM ELEMENT NUMBER = 3032
MESH THERMAL SHUNTS

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE ALL QUADRILATERAL OR BRICK ELEMENTS.

DEFAULT ELEMENT DIVISIONS PER LINE = 1

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
IN AREAS 5 TO 26 IN STEPS OF 1

NUMBER OF AREAS MESHED = 22
 MAXIMUM NODE NUMBER = 3924
 MAXIMUM ELEMENT NUMBER = 3320

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

NODE 878	USED FOR NODES	3738	
NODE 1168	USED FOR NODES	3855	
NODE 1169	USED FOR NODES	3854	
NODE 879	USED FOR NODES	3737	
NODE 84	USED FOR NODES	3812	
NODE 584	USED FOR NODES	3790	
NODE 583	USED FOR NODES	3791	
NODE 82	USED FOR NODES	3536	
NODE 1451	USED FOR NODES	3900	
NODE 83	USED FOR NODES	581	3783
NODE 85	USED FOR NODES	3811	
NODE 86	USED FOR NODES	3810	
NODE 87	USED FOR NODES	3809	
NODE 88	USED FOR NODES	3808	
NODE 89	USED FOR NODES	3807	
NODE 1459	USED FOR NODES	3902	
NODE 90	USED FOR NODES	3806	
NODE 582	USED FOR NODES	726	3759
NODE 872	USED FOR NODES	3719	
NODE 1016	USED FOR NODES	1162	3828
NODE 586	USED FOR NODES	3788	
NODE 1024	USED FOR NODES	3830	
NODE 1017	USED FOR NODES	3530	
NODE 1018	USED FOR NODES	3836	
NODE 585	USED FOR NODES	3789	
NODE 1019	USED FOR NODES	3835	
NODE 1306	USED FOR NODES	1452	3876
NODE 1023	USED FOR NODES	3831	
NODE 1022	USED FOR NODES	3832	
NODE 1021	USED FOR NODES	3833	
NODE 1020	USED FOR NODES	3834	
NODE 587	USED FOR NODES	3787	
NODE 588	USED FOR NODES	3786	
NODE 589	USED FOR NODES	3785	
NODE 1314	USED FOR NODES	3878	
NODE 1313	USED FOR NODES	3879	
NODE 1312	USED FOR NODES	3880	
NODE 1311	USED FOR NODES	3881	
NODE 1458	USED FOR NODES	3903	
NODE 1310	USED FOR NODES	3882	
NODE 1309	USED FOR NODES	3883	
NODE 1308	USED FOR NODES	3884	
NODE 1161	USED FOR NODES	1307	3852
NODE 727	USED FOR NODES	871	3735
NODE 728	USED FOR NODES	3767	
NODE 729	USED FOR NODES	3766	
NODE 734	USED FOR NODES	3761	
NODE 730	USED FOR NODES	3765	
NODE 733	USED FOR NODES	3762	
NODE 731	USED FOR NODES	3764	
NODE 732	USED FOR NODES	3763	
NODE 1167	USED FOR NODES	3856	
NODE 1453	USED FOR NODES	3908	
NODE 1454	USED FOR NODES	3907	
NODE 1455	USED FOR NODES	3906	
NODE 1166	USED FOR NODES	3857	
NODE 1165	USED FOR NODES	3858	
NODE 1164	USED FOR NODES	3859	
NODE 1163	USED FOR NODES	3860	
NODE 1456	USED FOR NODES	3905	
NODE 1457	USED FOR NODES	3904	
NODE 877	USED FOR NODES	3739	
NODE 876	USED FOR NODES	3740	
NODE 875	USED FOR NODES	3741	
NODE 874	USED FOR NODES	3742	

NODE	873	USED FOR NODES	3743
NODE	1195	USED FOR NODES	1381
NODE	1050	USED FOR NODES	1236
NODE	801	USED FOR NODES	905
NODE	107	USED FOR NODES	3565
NODE	1091	USED FOR NODES	3550
NODE	132	USED FOR NODES	615
NODE	1340	USED FOR NODES	1526
NODE	656	USED FOR NODES	760
NODE	1194	USED FOR NODES	1382
NODE	802	USED FOR NODES	904
NODE	1049	USED FOR NODES	1237
NODE	106	USED FOR NODES	3566
NODE	133	USED FOR NODES	614
NODE	1092	USED FOR NODES	3551
NODE	1339	USED FOR NODES	1527
NODE	657	USED FOR NODES	759
NODE	1048	USED FOR NODES	1238
NODE	134	USED FOR NODES	613
NODE	803	USED FOR NODES	903
NODE	105	USED FOR NODES	3567
NODE	1093	USED FOR NODES	3552
NODE	1193	USED FOR NODES	1383
NODE	658	USED FOR NODES	758
NODE	1338	USED FOR NODES	1528
NODE	104	USED FOR NODES	3568
NODE	1192	USED FOR NODES	1384
NODE	804	USED FOR NODES	902
NODE	135	USED FOR NODES	612
NODE	1047	USED FOR NODES	1239
NODE	1094	USED FOR NODES	3553
NODE	1337	USED FOR NODES	1529
NODE	659	USED FOR NODES	757
NODE	660	USED FOR NODES	756
NODE	1191	USED FOR NODES	1385
NODE	103	USED FOR NODES	3569
NODE	805	USED FOR NODES	901
NODE	1095	USED FOR NODES	3554
NODE	136	USED FOR NODES	611
NODE	1336	USED FOR NODES	1530
NODE	1046	USED FOR NODES	1240
NODE	661	USED FOR NODES	755
NODE	1096	USED FOR NODES	3555
NODE	1190	USED FOR NODES	1386
NODE	102	USED FOR NODES	3570
NODE	806	USED FOR NODES	900
NODE	137	USED FOR NODES	610
NODE	1335	USED FOR NODES	1531
NODE	1045	USED FOR NODES	1241
NODE	662	USED FOR NODES	754
NODE	1097	USED FOR NODES	3556
NODE	138	USED FOR NODES	609
NODE	1044	USED FOR NODES	1242
NODE	1189	USED FOR NODES	1387
NODE	807	USED FOR NODES	899
NODE	101	USED FOR NODES	3571
NODE	1334	USED FOR NODES	1532
NODE	780	USED FOR NODES	1747
NODE	120	USED FOR NODES	151
NODE	119	USED FOR NODES	152
NODE	118	USED FOR NODES	153
NODE	117	USED FOR NODES	154
NODE	923	USED FOR NODES	3210
NODE	1503	USED FOR NODES	3499
NODE	1504	USED FOR NODES	3498
NODE	777	USED FOR NODES	898
NODE	1188	USED FOR NODES	1357
NODE	1358	USED FOR NODES	2184
NODE	1359	USED FOR NODES	2183
NODE	1360	USED FOR NODES	2182

1742	3203
2031	2177

NODE 1361	USED FOR NODES	2181		
NODE 1362	USED FOR NODES	2180		
NODE 1363	USED FOR NODES	2179		
NODE 1364	USED FOR NODES	2178		
NODE 778	USED FOR NODES	1749		
NODE 779	USED FOR NODES	1748		
NODE 1505	USED FOR NODES	3497		
NODE 1506	USED FOR NODES	3496		
NODE 1043	USED FOR NODES	1212	1886	2032
NODE 1213	USED FOR NODES	2039		
NODE 781	USED FOR NODES	1746		
NODE 782	USED FOR NODES	1745		
NODE 783	USED FOR NODES	1744		
NODE 784	USED FOR NODES	1743		
NODE 1214	USED FOR NODES	2038		
NODE 1215	USED FOR NODES	2037		
NODE 1507	USED FOR NODES	3495		
NODE 1508	USED FOR NODES	3494		
NODE 1509	USED FOR NODES	3493		
NODE 1216	USED FOR NODES	2036		
NODE 1217	USED FOR NODES	2035		
NODE 1218	USED FOR NODES	2034		
NODE 635	USED FOR NODES	1602		
NODE 1219	USED FOR NODES	2033		
NODE 1074	USED FOR NODES	1888		
NODE 636	USED FOR NODES	1601		
NODE 637	USED FOR NODES	1600		
NODE 929	USED FOR NODES	3204		
NODE 638	USED FOR NODES	1599		
NODE 100	USED FOR NODES	146	3564	
NODE 639	USED FOR NODES	1598		
NODE 928	USED FOR NODES	3205		
NODE 1333	USED FOR NODES	1502	2176	3468
NODE 1478	USED FOR NODES	3492		
NODE 1067	USED FOR NODES	1887	3548	
NODE 116	USED FOR NODES	147	608	1596
NODE 922	USED FOR NODES	3191		
NODE 924	USED FOR NODES	3209		
NODE 925	USED FOR NODES	3208		
NODE 926	USED FOR NODES	3207		
NODE 927	USED FOR NODES	3206		
NODE 121	USED FOR NODES	150		
NODE 122	USED FOR NODES	149		
NODE 123	USED FOR NODES	148		
NODE 632	USED FOR NODES	753	1597	1741
NODE 1073	USED FOR NODES	1889		
NODE 1072	USED FOR NODES	1890		
NODE 1071	USED FOR NODES	1891		
NODE 1070	USED FOR NODES	1892		
NODE 1069	USED FOR NODES	1893		
NODE 1068	USED FOR NODES	1894		
NODE 634	USED FOR NODES	1603		
NODE 633	USED FOR NODES	1604		
NODE 1961	USED FOR NODES	3590		
NODE 1920	USED FOR NODES	2106		
NODE 1671	USED FOR NODES	1775		
NODE 180	USED FOR NODES	3605		
NODE 2210	USED FOR NODES	3469		
NODE 1816	USED FOR NODES	3234		
NODE 2065	USED FOR NODES	2251		
NODE 221	USED FOR NODES	1630		
NODE 1962	USED FOR NODES	3591		
NODE 179	USED FOR NODES	3606		
NODE 1919	USED FOR NODES	2107		
NODE 2209	USED FOR NODES	3470		
NODE 2064	USED FOR NODES	2252		
NODE 1672	USED FOR NODES	1774		
NODE 222	USED FOR NODES	1629		
NODE 1817	USED FOR NODES	3233		
NODE 1673	USED FOR NODES	1773		

NODE	178	USED	FOR	NODES	3607		
NODE	223	USED	FOR	NODES	1628		
NODE	1963	USED	FOR	NODES	3592		
NODE	1818	USED	FOR	NODES	3232		
NODE	1918	USED	FOR	NODES	2108		
NODE	2208	USED	FOR	NODES	3471		
NODE	2063	USED	FOR	NODES	2253		
NODE	1917	USED	FOR	NODES	2109		
NODE	177	USED	FOR	NODES	3608		
NODE	2207	USED	FOR	NODES	3472		
NODE	224	USED	FOR	NODES	1627		
NODE	1674	USED	FOR	NODES	1772		
NODE	1964	USED	FOR	NODES	3593		
NODE	1819	USED	FOR	NODES	3231		
NODE	2062	USED	FOR	NODES	2254		
NODE	1916	USED	FOR	NODES	2110		
NODE	176	USED	FOR	NODES	3609		
NODE	2206	USED	FOR	NODES	3473		
NODE	2061	USED	FOR	NODES	2255		
NODE	225	USED	FOR	NODES	1626		
NODE	1965	USED	FOR	NODES	3594		
NODE	1675	USED	FOR	NODES	1771		
NODE	1820	USED	FOR	NODES	3230		
NODE	1966	USED	FOR	NODES	3595		
NODE	175	USED	FOR	NODES	3610		
NODE	1821	USED	FOR	NODES	3229		
NODE	2205	USED	FOR	NODES	3474		
NODE	1915	USED	FOR	NODES	2111		
NODE	226	USED	FOR	NODES	1625		
NODE	1676	USED	FOR	NODES	1770		
NODE	2060	USED	FOR	NODES	2256		
NODE	1822	USED	FOR	NODES	3228		
NODE	174	USED	FOR	NODES	3611		
NODE	1967	USED	FOR	NODES	3596		
NODE	2204	USED	FOR	NODES	3475		
NODE	1914	USED	FOR	NODES	2112		
NODE	227	USED	FOR	NODES	1624		
NODE	2059	USED	FOR	NODES	2257		
NODE	1677	USED	FOR	NODES	1769		
NODE	199	USED	FOR	NODES	298		
NODE	198	USED	FOR	NODES	299		
NODE	1792	USED	FOR	NODES	2467	3227	
NODE	1793	USED	FOR	NODES	2474		
NODE	1939	USED	FOR	NODES	2618		
NODE	1938	USED	FOR	NODES	2619		
NODE	1794	USED	FOR	NODES	2473		
NODE	1913	USED	FOR	NODES	2082	2611	2757
NODE	1795	USED	FOR	NODES	2472		
NODE	1796	USED	FOR	NODES	2471		
NODE	1797	USED	FOR	NODES	2470		
NODE	1798	USED	FOR	NODES	2469		
NODE	1799	USED	FOR	NODES	2468		
NODE	2203	USED	FOR	NODES	2901	3442	
NODE	2058	USED	FOR	NODES	2227	2756	2902
NODE	2234	USED	FOR	NODES	2903		
NODE	173	USED	FOR	NODES	291	3604	
NODE	2083	USED	FOR	NODES	2764		
NODE	2233	USED	FOR	NODES	2904		
NODE	2232	USED	FOR	NODES	2905		
NODE	2231	USED	FOR	NODES	2906		
NODE	2230	USED	FOR	NODES	2907		
NODE	2229	USED	FOR	NODES	2908		
NODE	2084	USED	FOR	NODES	2763		
NODE	1937	USED	FOR	NODES	2612	3588	
NODE	2228	USED	FOR	NODES	2909		
NODE	1940	USED	FOR	NODES	2617		
NODE	1941	USED	FOR	NODES	2616		
NODE	1942	USED	FOR	NODES	2615		
NODE	2085	USED	FOR	NODES	2762		
NODE	1943	USED	FOR	NODES	2614		

NODE	2086	USED FOR NODES	2761		
NODE	1944	USED FOR NODES	2613		
NODE	2087	USED FOR NODES	2760		
NODE	197	USED FOR NODES	292	1623	2321
NODE	2088	USED FOR NODES	2759		
NODE	200	USED FOR NODES	297		
NODE	201	USED FOR NODES	296		
NODE	202	USED FOR NODES	295		
NODE	203	USED FOR NODES	294		
NODE	1647	USED FOR NODES	1768	2322	2466
NODE	1648	USED FOR NODES	2329		
NODE	1649	USED FOR NODES	2328		
NODE	204	USED FOR NODES	293		
NODE	1654	USED FOR NODES	2323		
NODE	1653	USED FOR NODES	2324		
NODE	1652	USED FOR NODES	2325		
NODE	1651	USED FOR NODES	2326		
NODE	2089	USED FOR NODES	2758		
NODE	1650	USED FOR NODES	2327		
NODE	325	USED FOR NODES	3645		
NODE	2686	USED FOR NODES	3630		
NODE	2790	USED FOR NODES	2976		
NODE	2541	USED FOR NODES	3258		
NODE	366	USED FOR NODES	2355		
NODE	2396	USED FOR NODES	2500		
NODE	2935	USED FOR NODES	3443		
NODE	2645	USED FOR NODES	2831		
NODE	2789	USED FOR NODES	2977		
NODE	324	USED FOR NODES	3646		
NODE	2542	USED FOR NODES	3257		
NODE	367	USED FOR NODES	2354		
NODE	2644	USED FOR NODES	2832		
NODE	2397	USED FOR NODES	2499		
NODE	2934	USED FOR NODES	3444		
NODE	2687	USED FOR NODES	3631		
NODE	323	USED FOR NODES	3647		
NODE	2398	USED FOR NODES	2498		
NODE	2643	USED FOR NODES	2833		
NODE	2688	USED FOR NODES	3632		
NODE	2788	USED FOR NODES	2978		
NODE	2543	USED FOR NODES	3256		
NODE	368	USED FOR NODES	2353		
NODE	2933	USED FOR NODES	3445		
NODE	2642	USED FOR NODES	2834		
NODE	322	USED FOR NODES	3648		
NODE	2787	USED FOR NODES	2979		
NODE	2399	USED FOR NODES	2497		
NODE	2544	USED FOR NODES	3255		
NODE	369	USED FOR NODES	2352		
NODE	2932	USED FOR NODES	3446		
NODE	2689	USED FOR NODES	3633		
NODE	2641	USED FOR NODES	2835		
NODE	321	USED FOR NODES	3649		
NODE	2786	USED FOR NODES	2980		
NODE	2400	USED FOR NODES	2496		
NODE	2931	USED FOR NODES	3447		
NODE	2545	USED FOR NODES	3254		
NODE	370	USED FOR NODES	2351		
NODE	2690	USED FOR NODES	3634		
NODE	320	USED FOR NODES	3650		
NODE	2785	USED FOR NODES	2981		
NODE	2401	USED FOR NODES	2495		
NODE	2640	USED FOR NODES	2836		
NODE	2546	USED FOR NODES	3253		
NODE	371	USED FOR NODES	2350		
NODE	2930	USED FOR NODES	3448		
NODE	2691	USED FOR NODES	3635		
NODE	319	USED FOR NODES	3651		
NODE	2692	USED FOR NODES	3636		
NODE	372	USED FOR NODES	2349		

NODE	2929	USED FOR NODES	3449		
NODE	2402	USED FOR NODES	2494		
NODE	2547	USED FOR NODES	3252		
NODE	2639	USED FOR NODES	2837		
NODE	2784	USED FOR NODES	2982		
NODE	348	USED FOR NODES	439		
NODE	347	USED FOR NODES	440		
NODE	346	USED FOR NODES	441		
NODE	2372	USED FOR NODES	2493	3275	
NODE	2517	USED FOR NODES	3251		
NODE	2518	USED FOR NODES	3282		
NODE	2519	USED FOR NODES	3281		
NODE	2520	USED FOR NODES	3280		
NODE	2521	USED FOR NODES	3279		
NODE	2522	USED FOR NODES	3278		
NODE	2523	USED FOR NODES	3277		
NODE	2373	USED FOR NODES	3308		
NODE	2524	USED FOR NODES	3276		
NODE	342	USED FOR NODES	437	2348	3301
NODE	2379	USED FOR NODES	3302		
NODE	345	USED FOR NODES	442		
NODE	318	USED FOR NODES	436	3644	
NODE	2638	USED FOR NODES	2807	3046	3370
NODE	2378	USED FOR NODES	3303		
NODE	349	USED FOR NODES	438		
NODE	2808	USED FOR NODES	3401		
NODE	2809	USED FOR NODES	3400		
NODE	2377	USED FOR NODES	3304		
NODE	2810	USED FOR NODES	3399		
NODE	2811	USED FOR NODES	3398		
NODE	2812	USED FOR NODES	3397		
NODE	2813	USED FOR NODES	3396		
NODE	2814	USED FOR NODES	3395		
NODE	2376	USED FOR NODES	3305		
NODE	344	USED FOR NODES	443		
NODE	343	USED FOR NODES	444		
NODE	2375	USED FOR NODES	3306		
NODE	2662	USED FOR NODES	3047	3628	
NODE	2663	USED FOR NODES	3054		
NODE	2664	USED FOR NODES	3053		
NODE	2665	USED FOR NODES	3052		
NODE	2783	USED FOR NODES	2952	3394	
NODE	2666	USED FOR NODES	3051		
NODE	2667	USED FOR NODES	3050		
NODE	2668	USED FOR NODES	3049		
NODE	2374	USED FOR NODES	3307		
NODE	2669	USED FOR NODES	3048		
NODE	2928	USED FOR NODES	3418		
NODE	2953	USED FOR NODES	3425		
NODE	2954	USED FOR NODES	3424		
NODE	2955	USED FOR NODES	3423		
NODE	2956	USED FOR NODES	3422		
NODE	2957	USED FOR NODES	3421		
NODE	2959	USED FOR NODES	3419		
NODE	2958	USED FOR NODES	3420		
NODE	3080	USED FOR NODES	3371		
NODE	470	USED FOR NODES	3685		
NODE	3121	USED FOR NODES	3670		
NODE	511	USED FOR NODES	3332		
NODE	469	USED FOR NODES	3686		
NODE	3079	USED FOR NODES	3372		
NODE	3122	USED FOR NODES	3671		
NODE	512	USED FOR NODES	3331		
NODE	468	USED FOR NODES	3687		
NODE	3078	USED FOR NODES	3373		
NODE	513	USED FOR NODES	3330		
NODE	3123	USED FOR NODES	3672		
NODE	467	USED FOR NODES	3688		
NODE	3077	USED FOR NODES	3374		
NODE	514	USED FOR NODES	3329		

NODE 3124 USED FOR NODES 3673
 NODE 466 USED FOR NODES 3689
 NODE 3076 USED FOR NODES 3375
 NODE 515 USED FOR NODES 3328
 NODE 3125 USED FOR NODES 3674
 NODE 465 USED FOR NODES 3690
 NODE 3075 USED FOR NODES 3376
 NODE 516 USED FOR NODES 3327
 NODE 3126 USED FOR NODES 3675
 NODE 464 USED FOR NODES 3691
 NODE 3074 USED FOR NODES 3377
 NODE 517 USED FOR NODES 3326
 NODE 3127 USED FOR NODES 3676
 NODE 463 USED FOR NODES 3684
 NODE 3073 USED FOR NODES 3358
 NODE 487 USED FOR NODES 3325
 NODE 3097 USED FOR NODES 3668

*** WARNING *** CP= 15.260 TIME= 20:47:23
 Same node numbers associated with more than one solid model entity.
 Future mesh clearing operations could produce unexpected results.
 NUMMRG,KP could correct this problem.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 15.980 TIME= 20:47:24
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 15.990 TIME= 20:47:24
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

KEYPOINT	38	USED FOR KEYPOINT(S)	150	
KEYPOINT	40	USED FOR KEYPOINT(S)	93	
KEYPOINT	41	USED FOR KEYPOINT(S)	155	198
KEYPOINT	43	USED FOR KEYPOINT(S)	96	101
KEYPOINT	44	USED FOR KEYPOINT(S)	203	238
KEYPOINT	46	USED FOR KEYPOINT(S)	105	109
KEYPOINT	47	USED FOR KEYPOINT(S)	243	262
KEYPOINT	49	USED FOR KEYPOINT(S)	113	117
KEYPOINT	50	USED FOR KEYPOINT(S)	267	
KEYPOINT	52	USED FOR KEYPOINT(S)	121	
KEYPOINT	54	USED FOR KEYPOINT(S)	142	
KEYPOINT	56	USED FOR KEYPOINT(S)	134	141
KEYPOINT	58	USED FOR KEYPOINT(S)	126	133
KEYPOINT	60	USED FOR KEYPOINT(S)	94	125
KEYPOINT	62	USED FOR KEYPOINT(S)	149	158
KEYPOINT	64	USED FOR KEYPOINT(S)	157	166
KEYPOINT	66	USED FOR KEYPOINT(S)	165	174
KEYPOINT	68	USED FOR KEYPOINT(S)	173	
KEYPOINT	69	USED FOR KEYPOINT(S)	147	
KEYPOINT	71	USED FOR KEYPOINT(S)	139	145 190
KEYPOINT	73	USED FOR KEYPOINT(S)	195	230
KEYPOINT	75	USED FOR KEYPOINT(S)	227	233
KEYPOINT	77	USED FOR KEYPOINT(S)	115	118 225
KEYPOINT	79	USED FOR KEYPOINT(S)	123	
KEYPOINT	81	USED FOR KEYPOINT(S)	265	
KEYPOINT	83	USED FOR KEYPOINT(S)	241	251 261
KEYPOINT	85	USED FOR KEYPOINT(S)	249	259
KEYPOINT	87	USED FOR KEYPOINT(S)	217	253
KEYPOINT	89	USED FOR KEYPOINT(S)	169	179 213
KEYPOINT	91	USED FOR KEYPOINT(S)	177	
KEYPOINT	95	USED FOR KEYPOINT(S)	102	129 181
KEYPOINT	107	USED FOR KEYPOINT(S)	110	185 221
KEYPOINT	131	USED FOR KEYPOINT(S)	137	182 189
KEYPOINT	153	USED FOR KEYPOINT(S)	163	197 206

KEYPOINT	161 USED FOR KEYPOINT(S)	171	205	214
KEYPOINT	187 USED FOR KEYPOINT(S)	193	222	229
KEYPOINT	201 USED FOR KEYPOINT(S)	211	237	246
KEYPOINT	209 USED FOR KEYPOINT(S)	219	245	254
LINE	58 USED FOR LINE(S)	235		
LINE	60 USED FOR LINE(S)	145		
LINE	61 USED FOR LINE(S)	307		
LINE	63 USED FOR LINE(S)	157		
LINE	64 USED FOR LINE(S)	367		
LINE	66 USED FOR LINE(S)	169		
LINE	67 USED FOR LINE(S)	403		
LINE	69 USED FOR LINE(S)	181		
LINE	76 USED FOR LINE(S)	213		
LINE	78 USED FOR LINE(S)	201		
LINE	80 USED FOR LINE(S)	189		
LINE	82 USED FOR LINE(S)	149		
LINE	84 USED FOR LINE(S)	225		
LINE	86 USED FOR LINE(S)	237		
LINE	88 USED FOR LINE(S)	249		
LINE	90 USED FOR LINE(S)	261		
LINE	95 USED FOR LINE(S)	220		
LINE	97 USED FOR LINE(S)	295		
LINE	103 USED FOR LINE(S)	340		
LINE	105 USED FOR LINE(S)	187		
LINE	111 USED FOR LINE(S)	397		
LINE	113 USED FOR LINE(S)	376		
LINE	119 USED FOR LINE(S)	325		
LINE	121 USED FOR LINE(S)	268		
LINE	137 USED FOR LINE(S)	223		

*** WARNING ***

Due to merge, line 137 is now meshed.

LINE 138 USED FOR LINE(S) 184

CP= 16.440 TIME= 20:47:25

*** WARNING ***

Due to merge, line 138 is now meshed.

LINE 139 USED FOR LINE(S) 400

CP= 16.450 TIME= 20:47:25

*** WARNING ***

Due to merge, line 139 is now meshed.

LINE 140 USED FOR LINE(S) 265

CP= 16.450 TIME= 20:47:25

*** WARNING ***

Due to merge, line 140 is now meshed.

LINE 148 USED FOR LINE(S) 193

LINE 152 USED FOR LINE(S) 153

LINE 160 USED FOR LINE(S) 165

LINE 163 USED FOR LINE(S) 277

LINE 172 USED FOR LINE(S) 177

LINE 175 USED FOR LINE(S) 337

LINE 196 USED FOR LINE(S) 273

LINE 199 USED FOR LINE(S) 205

LINE 208 USED FOR LINE(S) 285

LINE 211 USED FOR LINE(S) 217

LINE 229 USED FOR LINE(S) 247

LINE 232 USED FOR LINE(S) 297

LINE 241 USED FOR LINE(S) 259

LINE 244 USED FOR LINE(S) 309

LINE 253 USED FOR LINE(S) 271

LINE 256 USED FOR LINE(S) 321

LINE 280 USED FOR LINE(S) 333

LINE 283 USED FOR LINE(S) 289

LINE 292 USED FOR LINE(S) 345

LINE 301 USED FOR LINE(S) 319

LINE 304 USED FOR LINE(S) 357

LINE 313 USED FOR LINE(S) 331

LINE 316 USED FOR LINE(S) 369

LINE 328 USED FOR LINE(S) 381

LINE 343 USED FOR LINE(S) 349

LINE 361 USED FOR LINE(S) 379

CP= 16.450 TIME= 20:47:25

```

LINE 364 USED FOR LINE(S) 393
LINE 373 USED FOR LINE(S) 391
*****
      Create mesh in UCF inner shell
      (L's 105,108 ????)

SELECT      FOR ITEM=LINE COMPONENT=
IN RANGE    13 TO      22 STEP      1

      10 LINES (OF 348 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
      LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 145 KP1= 15 KP2= 25

SELECT      FOR ITEM=LINE COMPONENT=
IN RANGE    23 TO      32 STEP      1

      10 LINES (OF 349 DEFINED) SELECTED BY LSEL COMMAND.

CONCATENATE LINES
      LINE LIST = ALL SELECTED LINES

COMPOSITE LINE NO.= 149 KP1= 25 KP2= 35

ALL SELECT  FOR ITEM=LINE COMPONENT=
IN RANGE    1 TO      404 STEP      1

      350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 8 (IF SELECTED AND UNMESHED)
      TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 9 (IF SELECTED AND UNMESHED)
      TO NDIV = 60, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 12 (IF SELECTED AND UNMESHED)
      TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 33 (IF SELECTED AND UNMESHED)
      TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
      IN AREAS 3 TO 4 IN STEPS OF 1

*** WARNING ***                      CP= 17.470 TIME= 20:47:26
Meshing of area 3 produced 54 poorly shaped elements.

*** NOTE ***                          CP= 17.470 TIME= 20:47:26
Worst shape angle is 29 degrees.

      *** LIST OF ELEMENTS WITH POOR SHAPE ***
      3327 3328 3329 3330 3331 3332 3333 3334 3335 3354
      3355 3356 3357 3358 3359 3360 3361 3362 3363 3364
      3365 3366 3367 3368 3402 3403 3404 3417 3418 3419
      3453 3454 3455 3456 3457 3458 3459 3460 3461 3462
      3463 3464 3465 3466 3467 3486 3487 3488 3489 3490
      3491 3492 3493 3494

*** WARNING ***                      CP= 18.270 TIME= 20:47:27
Meshing of area 4 produced 54 poorly shaped elements.

*** NOTE ***                          CP= 18.270 TIME= 20:47:27
Worst shape angle is 29 degrees.

```

*** LIST OF ELEMENTS WITH POOR SHAPE ***

3507	3508	3509	3510	3511	3512	3513	3514	3515	3534
3535	3536	3537	3538	3539	3540	3541	3542	3543	3544
3545	3546	3547	3548	3582	3583	3584	3597	3598	3599
3633	3634	3635	3636	3637	3638	3639	3640	3641	3642
3643	3644	3645	3646	3647	3666	3667	3668	3669	3670
3671	3672	3673	3674						

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4375
 MAXIMUM ELEMENT NUMBER = 3680
 Delete concatenated lines
 (L's freed up 105,108 ????)
 LDELE,105,108,1, LEAVE THEM FOR NOW, WHO CARES

SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 6 TO 7 STEP 1
 2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON ALL SELECTED UNMESHED LINES
 TO NDIV = 60, SPACING RATIO = 1.000

ALL SELECT FOR ITEM=LINE COMPONENT=
 IN RANGE 1 TO 404 STEP 1
 350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SET DIVISIONS ON LINE 5 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 10 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

SET DIVISIONS ON LINE 11 (IF SELECTED AND UNMESHED)
 TO NDIV = 3, SPACING RATIO = 1.000

MATERIAL NUMBER SET TO 15

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS
 IN AREAS 1 TO 2 IN STEPS OF 1

NUMBER OF AREAS MESHED = 2
 MAXIMUM NODE NUMBER = 4738
 MAXIMUM ELEMENT NUMBER = 4040

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 21.720 TIME= 20:47:30
 Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 21.770 TIME= 20:47:30
 Keypoints 30 and 257 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

*** WARNING *** CP= 21.770 TIME= 20:47:30
 Keypoints 20 and 235 cannot be merged because:
 (1) One or both of them belong to lines.
 (2) The distance between them (3.535443718E-05) exceeds the
 tolerance (1.6E-06).

Create mesh in empty basket spaces

DEFAULT ELEMENT DIVISIONS PER LINE BASED ON ELEMENT SIZE = .100

FOR ELEMENT TYPE(S) ALLOWING MULTIPLE SHAPES:
PRODUCE MIXED ELEMENT SHAPES. (MAY PRODUCE ALL QUADRILATERAL
OR ALL BRICK ELEMENTS UNDER CERTAIN CONDITIONS.)

MATERIAL NUMBER SET TO 7

ELEMENT TYPE SET TO 1

GENERATE NODES AND ELEMENTS

IN AREAS	43 TO	50 IN STEPS OF	1
** AREA	43 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	44 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **
** AREA	45 MESHED WITH	86 QUADRILATERALS,	19 TRIANGLES **
** AREA	46 MESHED WITH	90 QUADRILATERALS,	23 TRIANGLES **

NUMBER OF AREAS MESHED = 8
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4572

MERGE COINCIDENT NODES WITHIN TOLERANCE OF .10000E-03

*** NOTE *** CP= 26.950 TIME= 20:47:35
Zero nodes were merged.

MERGE COINCIDENT KEYPOINTS WITHIN TOLERANCE OF .10000E-03

*** WARNING *** CP= 27.000 TIME= 20:47:35
Keypoints 30 and 257 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

*** WARNING *** CP= 27.010 TIME= 20:47:35
Keypoints 20 and 235 cannot be merged because:
(1) One or both of them belong to lines.
(2) The distance between them (3.535443718E-05) exceeds the
tolerance (1.6E-06).

Create radiation surface elements
Basket spaces

MATERIAL NUMBER SET TO 2

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS

ON LINES 14 TO 16 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4596

GENERATE NODES AND ELEMENTS

ON LINES 19 TO 21 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4620

GENERATE NODES AND ELEMENTS

ON LINES 24 TO 26 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4644

GENERATE NODES AND ELEMENTS
ON LINES 29 TO 31 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4668

GENERATE NODES AND ELEMENTS
ON LINES 93 TO 94 IN STEPS OF 1

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4674

GENERATE NODES AND ELEMENTS
ON LINES 96 TO 124 IN STEPS OF 2

NUMBER OF LINES MESHED = 15
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4779

GENERATE NODES AND ELEMENTS
ON LINES 107 TO 109 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4785

GENERATE NODES AND ELEMENTS
ON LINES 123 TO 123 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4788

MATERIAL NUMBER SET TO 1

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 137 TO 140 IN STEPS OF 1

NUMBER OF LINES MESHED = 4
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4820

MATERIAL NUMBER SET TO 13

ELEMENT TYPE SET TO 17

GENERATE NODES AND ELEMENTS
ON LINES 70 TO 72 IN STEPS OF 2

NUMBER OF LINES MESHED = 2
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4826

GENERATE NODES AND ELEMENTS
ON LINES 74 TO 74 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4829

GENERATE NODES AND ELEMENTS
ON LINES 92 TO 92 IN STEPS OF 1

NUMBER OF LINES MESHED = 1
MAXIMUM NODE NUMBER = 5106
MAXIMUM ELEMENT NUMBER = 4832

***** ROUTINE COMPLETED ***** CP = 27.370

Create element mesh plots to illustrate model
View mesh for entire model

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (CENTROIDAL SORT) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS 0 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

/SHOW SWITCH PLOTS TO FILE meshfull.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshfull.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4300 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

/SHOW SWITCH PLOTS TO FILE meshgap.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshgap.grph - VECTOR MODE.
DISPLAY TITLE=
44 BWR UCF/Waste Package - 1/2 FEM Model
View mesh for radiation substructure

MAT NUMBERING KEY = 0

TYPE NUMBERING KEY = 1

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=
44 BWR UCF/Waste Package - Radiation Matrix

/SHOW SWITCH PLOTS TO FILE meshrad.grph - VECTOR MODE.
- GRAPHIC PLANES = 8.

PRODUCE ELEMENT PLOT IN DSYS = 0

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE meshrad.grph - VECTOR MODE.

DISPLAY TITLE=

44 BWR UCF/Waste Package - Radiation Matrix

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

TITLE=

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

Generate super-elements

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 20:47:41 JUN 17, 1995 CP= 32.240

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RADIATION MATRIX UTILITY (AUX12) *****

SELECT FOR ITEM=TYPE COMPONENT=

IN RANGE 17 TO 17 STEP 1

260 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

SELECT ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

260 NODES (OF 4634 DEFINED) SELECTED FROM

260 SELECTED ELEMENTS BY NSLE COMMAND.

STEFAN-BOLTZMANN CONSTANT= .56700E-07

TWO DIMENSIONAL PLANE GEOMETRY (UNIT THICKNESS)

HIDDEN SURFACE (SLOW) METHOD

NUMBER OF ZONES= 800

WRITE RADIATION MATRIX TO FILE= spaces.sub

*** WARNING ***

CP= 32.460 TIME= 20:47:41

No space node defined. An enclosed system need not have a space node.

For an open system a space node is required to account for radiation losses.

NUMBER OF ELEMENTS= 260 NUMBER OF NODES= 260

800 ZONES CREATE 1600 RAYS

ALL SELECT FOR ITEM=ELEM COMPONENT=

IN RANGE 1 TO 4832 STEP 1

4832 ELEMENTS (OF 4832 DEFINED) SELECTED BY ESEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=

IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 43.370

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:47:52 JUN 17, 1995 CP= 43.370
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

ELEMENT TYPE SET TO 18

SUPERELEMENT 4833 spaces NODE TOLERANCE = .10000E-03

STORE DOFS OF SUPERELEMENT 4833

CURRENT NODAL DOF SET IS TEMP
THREE-DIMENSIONAL MODEL

STORE NODES OF SUPERELEMENT 4833
Delete radiation edge elements

SELECT FOR ITEM=TYPE COMPONENT=
IN RANGE 17 TO 17 STEP 1

36 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

CLEAR NODES AND ELEMENTS FROM ALL SELECTED LINES.

*** NOTE *** CP= 43.430 TIME= 20:47:52
Nodes cannot be cleared from line 14 because area 47 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.440 TIME= 20:47:52
Nodes cannot be cleared from line 16 because area 43 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.440 TIME= 20:47:52
Nodes cannot be cleared from line 19 because area 44 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.450 TIME= 20:47:52
Nodes cannot be cleared from line 21 because area 48 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.450 TIME= 20:47:52
Nodes cannot be cleared from line 24 because area 49 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.460 TIME= 20:47:52
Nodes cannot be cleared from line 26 because area 45 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.460 TIME= 20:47:52
Nodes cannot be cleared from line 29 because area 46 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.470 TIME= 20:47:52
Nodes cannot be cleared from line 31 because area 50 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.470 TIME= 20:47:52
Nodes cannot be cleared from line 70 because area 15 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.480 TIME= 20:47:52
Nodes cannot be cleared from line 72 because area 16 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.480 TIME= 20:47:52
Nodes cannot be cleared from line 74 because area 17 is meshed. Only

elements are deleted.

*** NOTE *** CP= 43.480 TIME= 20:47:52
Nodes cannot be cleared from line 92 because area 26 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.490 TIME= 20:47:52
Nodes cannot be cleared from line 93 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.490 TIME= 20:47:52
Nodes cannot be cleared from line 94 because area 27 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.490 TIME= 20:47:52
Nodes cannot be cleared from line 96 because area 28 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.490 TIME= 20:47:52
Nodes cannot be cleared from line 98 because area 29 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.500 TIME= 20:47:52
Nodes cannot be cleared from line 100 because area 30 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.500 TIME= 20:47:52
Nodes cannot be cleared from line 102 because area 31 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.510 TIME= 20:47:52
Nodes cannot be cleared from line 104 because area 32 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.510 TIME= 20:47:52
Nodes cannot be cleared from line 106 because area 33 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.510 TIME= 20:47:52
Nodes cannot be cleared from line 107 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.520 TIME= 20:47:52
Nodes cannot be cleared from line 108 because area 34 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.520 TIME= 20:47:52
Nodes cannot be cleared from line 109 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.520 TIME= 20:47:52
Nodes cannot be cleared from line 110 because area 35 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.530 TIME= 20:47:52
Nodes cannot be cleared from line 112 because area 36 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.530 TIME= 20:47:52
Nodes cannot be cleared from line 114 because area 37 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.530 TIME= 20:47:52
Nodes cannot be cleared from line 116 because area 38 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.540 TIME= 20:47:52
Nodes cannot be cleared from line 118 because area 39 is meshed. Only
elements are deleted.

*** NOTE *** CP= 43.540 TIME= 20:47:52
Nodes cannot be cleared from line 120 because area 40 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.550 TIME= 20:47:52
Nodes cannot be cleared from line 122 because area 41 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.550 TIME= 20:47:52
Nodes cannot be cleared from line 123 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.550 TIME= 20:47:52
Nodes cannot be cleared from line 124 because area 42 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.550 TIME= 20:47:52
Nodes cannot be cleared from line 137 because area 47 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.560 TIME= 20:47:52
Nodes cannot be cleared from line 138 because area 48 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.560 TIME= 20:47:52
Nodes cannot be cleared from line 139 because area 49 is meshed. Only elements are deleted.

*** NOTE *** CP= 43.570 TIME= 20:47:52
Nodes cannot be cleared from line 140 because area 50 is meshed. Only elements are deleted.

CLEARED 36 LINES, 0 KEYPOINTS.

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

***** ROUTINE COMPLETED ***** CP = 43.580

Set solution parameters and apply B.C.'s

Solve steady-state for initial conditions
with WP surface equal to drift ambient
temperature from repository model.

***** ANSYS SOLUTION ROUTINE *****

PERFORM A TRANSIENT ANALYSIS
THIS WILL BE A NEW ANALYSIS

USE THE DEFAULT NEWTON-RAPHSON OPTION FOR ALL DOFS
AND USE THE DEFAULT ADAPTIVE DESCENT OPTION

*** NOTE *** CP= 43.580 TIME= 20:47:52
Damping (if present) may be ignored only in reduced transient analyses.

PERFORM A FULL TRANSIENT ANALYSIS

TEMPERATURE OFFSET FROM ABSOLUTE ZERO= 273.150

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1

```
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1

2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.

121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES 1 TO 5106 BY 1
REAL= 26.1414001 IMAG= .000000000E+00

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .10000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

*** NOTE *** CP= 44.830 TIME= 20:47:54
All shape tests were bypassed for elements associated with the solid
model, because most of them were already done at AMESH or VMESH. Use
CHECK if desired to perform all of the element tests.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:47:54 JUN 17, 1995 CP= 44.840
FOR SUPPORT CALL ROBERT BAHNEY . PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF
```

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.3-D
 DEGREES OF FREEDOM. TEMP
 ANALYSIS TYPETRANSIENT
 SOLUTION METHOD.FULL
 OFFSET TEMPERATURE FROM ABSOLUTE ZERO 273.15
 NEWTON-RAPHSON OPTIONPROGRAM CHOSEN

*** NOTE *** CP= 45.760 TIME= 20:47:55
 This load step will be a static (steady-state) step.

*** NOTE *** CP= 46.170 TIME= 20:47:55
 Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution procedure) for ALL DOFs.

LOAD STEP OPTIONS

LOAD STEP NUMBER. 1
 TIME AT END OF THE LOAD STEP.10000E-05
 AUTOMATIC TIME STEPPING ON
 INITIAL NUMBER OF SUBSTEPS 0
 MAXIMUM NUMBER OF SUBSTEPS 0
 MINIMUM NUMBER OF SUBSTEPS 1
 MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
 STEP CHANGE BOUNDARY CONDITIONS NO
 TRANSIENT (INERTIA) EFFECTS OFF
 TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 4045.5

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = .33687	IXX = 641.6	IXX = 641.6
YC = .11253E-10	IYY = 641.6	IYY = 182.5
ZC = .00000E+00	IZZ = 1283.	IZZ = 824.0
	IXY = .1364E-12	IXY = .1534E-07
	IYZ = .0000E+00	IYZ = .0000E+00
	IZX = .0000E+00	IZX = .0000E+00

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	4045.51

Range of element maximum matrix coefficients in global coordinates
 Maximum= 258.626667 at element 3142.
 Minimum= 1.239134626E-09 at element 4833.

*** WARNING *** CP= 63.460 TIME= 20:48:14
 Coefficient ratio exceeds 1.0e8 - Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	11.590	.003
18	1	MATRIX50	.080	.080

Time at end of element matrix formulation CP= 63.47.
HT FLOW CONVERGENCE VALUE= 9968. CRITERION= 9.968

Estimated number of active DOF= 4513.
Maximum wavefront= 311.

Time at end of matrix triangularization CP= 81.64.
Equation solver maximum pivot= 835.577491 at node 3669 TEMP.
Equation solver minimum pivot= 0.317226744 at node 4984 TEMP.

EQUIL ITER	COMPLETED	NEW TRIANG MATRIX	MAX DOF INC	HT FLOW CONVERGENCE VALUE	CRITERION
1	COMPLETED	NEW TRIANG MATRIX	237.7	108.3	.4238
2	COMPLETED	NEW TRIANG MATRIX	-48.30	10.17	.4119
3	COMPLETED	NEW TRIANG MATRIX	5.127	.6486	.4092
4	COMPLETED	NEW TRIANG MATRIX	-.3757	.3372E-01	.4091

<<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 4

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	6.520	.001
18	1	MATRIX50	.120	.120

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	4572	PLANE55	.940	.000
18	1	MATRIX50	.000	.000

*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 4
*** TIME = .100000E-05 TIME INC = .100000E-05

*** PROBLEM STATISTICS

ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 4513
R.M.S. WAVEFRONT SIZE = 152.0

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
2.125 MB WRITTEN ON ELEMENT MATRIX FILE: ucf44h.emat
2.047 MB WRITTEN ON ELEMENT SAVED DATA FILE: ucf44h.esav
5.219 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: ucf44h.tri
.016 MB WRITTEN ON SUBSTRUCTURE DOF SOLUTION FILE: ucf44h.dsub
2.484 MB WRITTEN ON RESULTS FILE: ucf44h.rth
Solve steady-state for initial conditions
with WP surface temperatures from repository
steady-state solution.

SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 6 TO 6 STEP 1
1 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALSO SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 7 TO 7 STEP 1
2 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

SELECT ALL NODES (INTERIOR TO LINE, AND AT KEYPOINTS)
RELATED TO SELECTED LINE SET.
121 NODES (OF 4634 DEFINED) SELECTED FROM
2 SELECTED LINES BY NSLL COMMAND.

DELETE SPECIFIED CONSTRAINT TEMP FOR SELECTED NODES
RANGE 1 TO 5106 BY 1

NUMBER OF SPECIFIED CONSTRAINTS DELETED= 121

ALL SELECT FOR ITEM=LINE COMPONENT=
IN RANGE 1 TO 404 STEP 1

350 LINES (OF 350 DEFINED) SELECTED BY LSEL COMMAND.

ALL SELECT FOR ITEM=NODE COMPONENT=
IN RANGE 1 TO 5106 STEP 1

4634 NODES (OF 4634 DEFINED) SELECTED BY NSEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 69.140 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 69.194 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.256 .00000E+00 EXPANSION KEY = 1

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

DO NOT INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

TIME= .20000E-05

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

STEP BOUNDARY CONDITION KEY= 0

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** WARNING *** CP= 209.330 TIME= 20:50:43
This load step will be a static (steady-state) step.

*** NOTE *** CP= 209.740 TIME= 20:50:43
The step data was checked and warning messages were found.
Please review output or errors file (ucf44h.err) for these warning
messages.

*** NOTE *** CP= 209.740 TIME= 20:50:43
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:50:43 JUN 17, 1995 CP= 209.740
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 2
TIME AT END OF THE LOAD STEP.20000E-05
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 0
MAXIMUM NUMBER OF SUBSTEPS 0
MINIMUM NUMBER OF SUBSTEPS 1
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS OFF
TERMINATE ANALYSIS IF NOT CONVERGED. YES (EXIT)
CONVERGENCE CONTROLS. USE DEFAULTS
PRINT OUTPUT CONTROLS NO PRINTOUT
DATABASE OUTPUT CONTROLS. ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1641E+05 CRITERION= 16.41
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 43.30
HT FLOW CONVERGENCE VALUE= 33.90 CRITERION= .4039
EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -11.26
HT FLOW CONVERGENCE VALUE= 3.171 CRITERION= .4000
EQUIL ITER 3 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 1.425
HT FLOW CONVERGENCE VALUE= .1873 CRITERION= .3993 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 3
*** LOAD STEP 2 SUBSTEP 1 COMPLETED. CUM ITER = 7
*** TIME = .20000E-05 TIME INC = .10000E-05

Set time integration parameters

INCLUDE TRANSIENT EFFECTS FOR ALL DOFS THIS LOAD STEP

USE AUTOMATIC TIME STEPPING THIS LOAD STEP
Time substep ranges from 10 sec to 1/4 loadstep

USE 10 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL DOFS
FOR AUTOMATIC TIME STEPPING:

USE 40 SUBSTEPS AS A MAXIMUM
USE 5 SUBSTEPS AS A MINIMUM
USE THE FINAL TIME STEP SIZE OF THE PREVIOUS LOAD STEP
AS THE STARTING TIME STEP SIZE.
Begin Transient
Apply loads and solve for 0 to .9 years

*DO LOOP ON PARAMETER= TM FROM 31.558 TO .28402E+08 BY .31558E+07

TIME= 31.558

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM

22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
6426.71813 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 69.140 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 69.194 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 69.256 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 318.890 TIME= 20:52:34
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 20:52:34 JUN 17, 1995 CP= 318.890
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 3
TIME AT END OF THE LOAD STEP. 31.558
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .1873 CRITERION= .3993
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2122E-03

HT FLOW CONVERGENCE VALUE= .6095E-05 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 1 COMPLETED. CUM ITER = 8
 *** TIME = .788942 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1937 OSCILLATION LIMIT = .1528
 *** AUTO STEP TIME: NEXT TIME INC = .78894 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3541 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2778E-03
 HT FLOW CONVERGENCE VALUE= .8891E-05 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 2 COMPLETED. CUM ITER = 9
 *** TIME = 1.57788 TIME INC = .788940
 *** RESPONSE EIGENVALUE = .1130 OSCILLATION LIMIT = .8916E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= .3332 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3716E-03
 HT FLOW CONVERGENCE VALUE= .1640E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 3 COMPLETED. CUM ITER = 10
 *** TIME = 3.94470 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .3815E-01 OSCILLATION LIMIT = .9029E-01
 *** AUTO TIME STEP: NEXT TIME INC = 6.3115 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= .3138 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2224E-03
 HT FLOW CONVERGENCE VALUE= .3510E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 4 COMPLETED. CUM ITER = 11
 *** TIME = 10.2562 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .6276E-02 OSCILLATION LIMIT = .3961E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3048 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1655E-03
 HT FLOW CONVERGENCE VALUE= .3175E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 5 COMPLETED. CUM ITER = 12
 *** TIME = 16.5677 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .2156E-02 OSCILLATION LIMIT = .1361E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .3010 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1652E-03
 HT FLOW CONVERGENCE VALUE= .3086E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 6 COMPLETED. CUM ITER = 13
 *** TIME = 22.8793 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1936E-02 OSCILLATION LIMIT = .1222E-01
 *** AUTO STEP TIME: NEXT TIME INC = 6.3115 UNCHANGED

HT FLOW CONVERGENCE VALUE= .2977 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1649E-03
 HT FLOW CONVERGENCE VALUE= .3023E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 7 COMPLETED. CUM ITER = 14
 *** TIME = 29.1908 TIME INC = 6.31152
 *** RESPONSE EIGENVALUE = .1827E-02 OSCILLATION LIMIT = .1153E-01
 *** AUTO TIME STEP: NEXT TIME INC = 2.3668 DECREASED (FACTOR = .3750)

HT FLOW CONVERGENCE VALUE= .2945 CRITERION= .3993
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6177E-04
 HT FLOW CONVERGENCE VALUE= .1122E-04 CRITERION= .3993 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 3 SUBSTEP 8 COMPLETED. CUM ITER = 15
 *** TIME = 31.5576 TIME INC = 2.36682
 *** RESPONSE EIGENVALUE = .1777E-02 OSCILLATION LIMIT = .4205E-02

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 21:00:06 JUN 17, 1995 CP= 762.760
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 279.9 CRITERION= .4877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7924
 HT FLOW CONVERGENCE VALUE= .4647 CRITERION= .3975
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8917E-01
 HT FLOW CONVERGENCE VALUE= .3138E-01 CRITERION= .3976 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 1 COMPLETED. CUM ITER = 17
 *** TIME = 78925.6 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = .8427
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 280.4 CRITERION= .4864
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7932
 HT FLOW CONVERGENCE VALUE= .5511 CRITERION= .3981
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1209
 HT FLOW CONVERGENCE VALUE= .3387E-01 CRITERION= .3981 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 2 COMPLETED. CUM ITER = 19
 *** TIME = 157820. TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9318E-06 OSCILLATION LIMIT = .7351E-01
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+06 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 839.8 CRITERION= .9294
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.377
 HT FLOW CONVERGENCE VALUE= 1.607 CRITERION= .3969
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4573
 HT FLOW CONVERGENCE VALUE= .1322 CRITERION= .3969 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 3 COMPLETED. CUM ITER = 21
 *** TIME = 394502. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1481E-05 OSCILLATION LIMIT = .3505
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 840.1 CRITERION= .9289
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.377
 HT FLOW CONVERGENCE VALUE= 1.668 CRITERION= .3969
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4664
 HT FLOW CONVERGENCE VALUE= .1336 CRITERION= .3969 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 4 COMPLETED. CUM ITER = 23
 *** TIME = 631184. TIME INC = 236682.
 *** RESPONSE EIGENVALUE = .1234E-05 OSCILLATION LIMIT = .2920
 *** AUTO TIME STEP: NEXT TIME INC = .40521E+06 INCREASED (FACTOR = 1.7121)

HT FLOW CONVERGENCE VALUE= 1437. CRITERION= 1.491
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.070
 HT FLOW CONVERGENCE VALUE= 3.054 CRITERION= .3954
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8608
 HT FLOW CONVERGENCE VALUE= .2485 CRITERION= .3953 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 5 COMPLETED. CUM ITER = 25
 *** TIME = .103640E+07 TIME INC = 405214.
 *** RESPONSE EIGENVALUE = .1368E-05 OSCILLATION LIMIT = .5544
 *** AUTO STEP TIME: NEXT TIME INC = .40521E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1437. CRITERION= 1.490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.070
 HT FLOW CONVERGENCE VALUE= 3.086 CRITERION= .3950
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8657

HT FLOW CONVERGENCE VALUE= .2506 CRITERION= .3949 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 6 COMPLETED. CUM ITER = 27
 *** TIME = .144161E+07 TIME INC = 405214.
 *** RESPONSE EIGENVALUE = .1263E-05 OSCILLATION LIMIT = .5118
 *** AUTO STEP TIME: NEXT TIME INC = .40521E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1436. CRITERION= 1.490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.070
 HT FLOW CONVERGENCE VALUE= 3.218 CRITERION= .3934
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8609
 HT FLOW CONVERGENCE VALUE= .2516 CRITERION= .3933 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 7 COMPLETED. CUM ITER = 29
 *** TIME = .184683E+07 TIME INC = 405214.
 *** RESPONSE EIGENVALUE = .1288E-05 OSCILLATION LIMIT = .5221
 *** AUTO STEP TIME: NEXT TIME INC = .40521E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1436. CRITERION= 1.489
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.070
 HT FLOW CONVERGENCE VALUE= 3.176 CRITERION= .3930
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8579
 HT FLOW CONVERGENCE VALUE= .2528 CRITERION= .3929 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 8 COMPLETED. CUM ITER = 31
 *** TIME = .225204E+07 TIME INC = 405214.
 *** RESPONSE EIGENVALUE = .1243E-05 OSCILLATION LIMIT = .5038
 *** AUTO STEP TIME: NEXT TIME INC = .40521E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1436. CRITERION= 1.488
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 4.070
 HT FLOW CONVERGENCE VALUE= 3.199 CRITERION= .3914
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8582
 HT FLOW CONVERGENCE VALUE= .2616 CRITERION= .3914 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 9 COMPLETED. CUM ITER = 33
 *** TIME = .265725E+07 TIME INC = 405214.
 *** RESPONSE EIGENVALUE = .1282E-05 OSCILLATION LIMIT = .5196
 *** AUTO STEP TIME: NEXT TIME INC = .24927E+06 DECREASED (FACTOR = .6152)

HT FLOW CONVERGENCE VALUE= 883.3 CRITERION= .9660
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.504
 HT FLOW CONVERGENCE VALUE= 2.255 CRITERION= .3913
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4957
 HT FLOW CONVERGENCE VALUE= .1533 CRITERION= .3914 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 10 COMPLETED. CUM ITER = 35
 *** TIME = .290652E+07 TIME INC = 249269.
 *** RESPONSE EIGENVALUE = .1191E-05 OSCILLATION LIMIT = .2969
 *** AUTO STEP TIME: NEXT TIME INC = .24927E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 882.7 CRITERION= .9656
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= 2.504
 HT FLOW CONVERGENCE VALUE= 2.169 CRITERION= .3904
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4938
 HT FLOW CONVERGENCE VALUE= .1551 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 4 SUBSTEP 11 COMPLETED. CUM ITER = 37
 *** TIME = .315579E+07 TIME INC = 249269.
 *** RESPONSE EIGENVALUE = .1301E-05 OSCILLATION LIMIT = .3244

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 21:15:09 JUN 17, 1995 CP= 1656.520
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 204.4 CRITERION= .4404
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8678
 HT FLOW CONVERGENCE VALUE= .5666 CRITERION= .3922
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1524
 HT FLOW CONVERGENCE VALUE= .4025E-01 CRITERION= .3921 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 1 COMPLETED. CUM ITER = 39
 *** TIME = .340506E+07 TIME INC = 249269.
 *** RESPONSE EIGENVALUE = .1335E-05 OSCILLATION LIMIT = .3329
 *** AUTO STEP TIME: NEXT TIME INC = .24927E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 203.6 CRITERION= .4418
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5387
 HT FLOW CONVERGENCE VALUE= .4186 CRITERION= .3903
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8342E-01
 HT FLOW CONVERGENCE VALUE= .3324E-01 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 5 SUBSTEP 2 COMPLETED. CUM ITER = 41
 *** TIME = .365433E+07 TIME INC = 249269.
 *** RESPONSE EIGENVALUE = .1048E-04 OSCILLATION LIMIT = 2.611
 *** AUTO TIME STEP: NEXT TIME INC = 83090. DECREASED (FACTOR = .3333)

HT FLOW CONVERGENCE VALUE= 68.46 CRITERION= .3960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2814
 HT FLOW CONVERGENCE VALUE= .1843 CRITERION= .3915 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 3 COMPLETED. CUM ITER = 42
 *** TIME = .373742E+07 TIME INC = 83089.7
 *** RESPONSE EIGENVALUE = .4722E-05 OSCILLATION LIMIT = .3924
 *** AUTO STEP TIME: NEXT TIME INC = 83090. UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.71 CRITERION= .3973
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1796
 HT FLOW CONVERGENCE VALUE= .1355 CRITERION= .3903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 4 COMPLETED. CUM ITER = 43
 *** TIME = .382051E+07 TIME INC = 83089.7
 *** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = .8954
 *** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .9495)

HT FLOW CONVERGENCE VALUE= 65.05 CRITERION= .3956
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1831
 HT FLOW CONVERGENCE VALUE= .1419 CRITERION= .3913 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 5 COMPLETED. CUM ITER = 44
 *** TIME = .389940E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7410E-05 OSCILLATION LIMIT = .5846
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.30 CRITERION= .3966
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1271 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 6 COMPLETED. CUM ITER = 45
 *** TIME = .397830E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8979E-05 OSCILLATION LIMIT = .7084
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.07 CRITERION= .3955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1818
 HT FLOW CONVERGENCE VALUE= .1385 CRITERION= .3912 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 7 COMPLETED. CUM ITER = 46
 *** TIME = .405719E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6368E-05 OSCILLATION LIMIT = .5024
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.33 CRITERION= .3964
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705

HT FLOW CONVERGENCE VALUE= .1246 CRITERION= .3900 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 8 COMPLETED. CUM ITER = 47
 *** TIME = .413609E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8027E-05 OSCILLATION LIMIT = .6333
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.09 CRITERION= .3954
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1808
 HT FLOW CONVERGENCE VALUE= .1366 CRITERION= .3910 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 9 COMPLETED. CUM ITER = 48
 *** TIME = .421498E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5909E-05 OSCILLATION LIMIT = .4662
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.36 CRITERION= .3963
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1246 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 10 COMPLETED. CUM ITER = 49
 *** TIME = .429387E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7318E-05 OSCILLATION LIMIT = .5774
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.10 CRITERION= .3953
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1804
 HT FLOW CONVERGENCE VALUE= .1344 CRITERION= .3909 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 11 COMPLETED. CUM ITER = 50
 *** TIME = .437277E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5551E-05 OSCILLATION LIMIT = .4379
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.39 CRITERION= .3961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1246 CRITERION= .3898 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 12 COMPLETED. CUM ITER = 51
 *** TIME = .445166E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6773E-05 OSCILLATION LIMIT = .5343
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.13 CRITERION= .3952
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1801
 HT FLOW CONVERGENCE VALUE= .1339 CRITERION= .3907 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 13 COMPLETED. CUM ITER = 52
 *** TIME = .453056E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5251E-05 OSCILLATION LIMIT = .4143
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.43 CRITERION= .3960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1251 CRITERION= .3897 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 14 COMPLETED. CUM ITER = 53
 *** TIME = .460945E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6306E-05 OSCILLATION LIMIT = .4975
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.16 CRITERION= .3951
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1799
 HT FLOW CONVERGENCE VALUE= .1336 CRITERION= .3905 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 15 COMPLETED. CUM ITER = 54
 *** TIME = .468834E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4994E-05 OSCILLATION LIMIT = .3940
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.47 CRITERION= .3959
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1253 CRITERION= .3895 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 16 COMPLETED. CUM ITER = 55
 *** TIME = .476724E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5914E-05 OSCILLATION LIMIT = .4666
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.20 CRITERION= .3949
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1796
 HT FLOW CONVERGENCE VALUE= .1333 CRITERION= .3904 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 17 COMPLETED. CUM ITER = 56
 *** TIME = .484613E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4764E-05 OSCILLATION LIMIT = .3758
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.51 CRITERION= .3957
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1254 CRITERION= .3894 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 18 COMPLETED. CUM ITER = 57
 *** TIME = .492503E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5577E-05 OSCILLATION LIMIT = .4400
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.23 CRITERION= .3948
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1793
 HT FLOW CONVERGENCE VALUE= .1329 CRITERION= .3902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 19 COMPLETED. CUM ITER = 58
 *** TIME = .500392E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4557E-05 OSCILLATION LIMIT = .3595
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.55 CRITERION= .3956
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1256 CRITERION= .3893 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 20 COMPLETED. CUM ITER = 59
 *** TIME = .508281E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5284E-05 OSCILLATION LIMIT = .4168
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.26 CRITERION= .3947
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1791
 HT FLOW CONVERGENCE VALUE= .1326 CRITERION= .3901 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 21 COMPLETED. CUM ITER = 60
 *** TIME = .516171E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4369E-05 OSCILLATION LIMIT = .3447
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 64.59 CRITERION= .3954
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
 HT FLOW CONVERGENCE VALUE= .1266 CRITERION= .3892 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 22 COMPLETED. CUM ITER = 61
 *** TIME = .524060E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5024E-05 OSCILLATION LIMIT = .3963
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 65.29 CRITERION= .3946
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1789
 HT FLOW CONVERGENCE VALUE= .1374 CRITERION= .3899 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 5 SUBSTEP 23 COMPLETED. CUM ITER = 62
 *** TIME = .531950E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4199E-05 OSCILLATION LIMIT = .3313

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*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 64.63    CRITERION= .3953
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
  HT FLOW CONVERGENCE VALUE= .1302    CRITERION= .3890    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 24 COMPLETED. CUM ITER = 63
*** TIME = .539839E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4798E-05    OSCILLATION LIMIT = .3785
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 65.33    CRITERION= .3945
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1786
  HT FLOW CONVERGENCE VALUE= .1374    CRITERION= .3898    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 25 COMPLETED. CUM ITER = 64
*** TIME = .547728E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4049E-05    OSCILLATION LIMIT = .3194
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 64.67    CRITERION= .3951
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
  HT FLOW CONVERGENCE VALUE= .1308    CRITERION= .3889    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 26 COMPLETED. CUM ITER = 65
*** TIME = .555618E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4589E-05    OSCILLATION LIMIT = .3620
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 65.36    CRITERION= .3943
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1784
  HT FLOW CONVERGENCE VALUE= .1376    CRITERION= .3896    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 27 COMPLETED. CUM ITER = 66
*** TIME = .563507E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3903E-05    OSCILLATION LIMIT = .3079
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 64.71    CRITERION= .3950
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1705
  HT FLOW CONVERGENCE VALUE= .1314    CRITERION= .3888    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 28 COMPLETED. CUM ITER = 67
*** TIME = .571397E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4403E-05    OSCILLATION LIMIT = .3474
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 65.39    CRITERION= .3942
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1782
  HT FLOW CONVERGENCE VALUE= .1397    CRITERION= .3895    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 29 COMPLETED. CUM ITER = 68
*** TIME = .579286E+07    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3773E-05    OSCILLATION LIMIT = .2976
*** AUTO TIME STEP: NEXT TIME INC = .13253E+06    INCREASED (FACTOR = 1.6799)

  HT FLOW CONVERGENCE VALUE= 109.0    CRITERION= .4045
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2864
  HT FLOW CONVERGENCE VALUE= .2305    CRITERION= .3886    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 30 COMPLETED. CUM ITER = 69
*** TIME = .592539E+07    TIME INC = 132533.
*** RESPONSE EIGENVALUE = .1933E-05    OSCILLATION LIMIT = .2561
*** AUTO TIME STEP: NEXT TIME INC = .25871E+06    INCREASED (FACTOR = 1.9520)

  HT FLOW CONVERGENCE VALUE= 213.7    CRITERION= .4434
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5674
  HT FLOW CONVERGENCE VALUE= .4591    CRITERION= .3894
  EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1072
  HT FLOW CONVERGENCE VALUE= .3787E-01    CRITERION= .3890    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
*** LOAD STEP 5 SUBSTEP 31 COMPLETED. CUM ITER = 71
*** TIME = .618410E+07 TIME INC = 258707.
*** RESPONSE EIGENVALUE = .3031E-05 OSCILLATION LIMIT = .7842
*** AUTO TIME STEP: NEXT TIME INC = .12745E+06 DECREASED (FACTOR = .4927)

HT FLOW CONVERGENCE VALUE= 104.9 CRITERION= .4030
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2754
HT FLOW CONVERGENCE VALUE= .2208 CRITERION= .3882 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 5 SUBSTEP 32 COMPLETED. CUM ITER = 72
*** TIME = .631155E+07 TIME INC = 127452.
*** RESPONSE EIGENVALUE = .1610E-05 OSCILLATION LIMIT = .2053
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 21:46:09 JUN 17, 1995 CP= 3494.140
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 68.28 CRITERION= .3942
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1866
HT FLOW CONVERGENCE VALUE= .1524 CRITERION= .3891 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 1 COMPLETED. CUM ITER = 73
*** TIME = .643900E+07 TIME INC = 127452.
*** RESPONSE EIGENVALUE = .2253E-05 OSCILLATION LIMIT = .2871
*** AUTO STEP TIME: NEXT TIME INC = .12745E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 67.61 CRITERION= .3949
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1781
HT FLOW CONVERGENCE VALUE= .1283 CRITERION= .3881 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 2 COMPLETED. CUM ITER = 74
*** TIME = .656646E+07 TIME INC = 127452.
*** RESPONSE EIGENVALUE = .9536E-05 OSCILLATION LIMIT = 1.215
*** AUTO TIME STEP: NEXT TIME INC = 78894. DECREASED (FACTOR = .6190)
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HT FLOW CONVERGENCE VALUE= 42.43 CRITERION= .3904
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1175
HT FLOW CONVERGENCE VALUE= .9004E-01 CRITERION= .3888 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 3 COMPLETED. CUM ITER = 75
*** TIME = .664535E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6525E-05 OSCILLATION LIMIT = .5148
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 41.75 CRITERION= .3911
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
HT FLOW CONVERGENCE VALUE= .8080E-01 CRITERION= .3879 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 4 COMPLETED. CUM ITER = 76
*** TIME = .672424E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .1009E-04 OSCILLATION LIMIT = .7963
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 42.45 CRITERION= .3903
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1172
HT FLOW CONVERGENCE VALUE= .8985E-01 CRITERION= .3887 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 6 SUBSTEP 5 COMPLETED. CUM ITER = 77
*** TIME = .680314E+07 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6603E-05 OSCILLATION LIMIT = .5209
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
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HT FLOW CONVERGENCE VALUE= 41.77 CRITERION= .3909

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8241E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 6 COMPLETED. CUM ITER = 78
 *** TIME = .688203E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8198E-05 OSCILLATION LIMIT = .6468
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.46 CRITERION= .3901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1169
 HT FLOW CONVERGENCE VALUE= .8925E-01 CRITERION= .3886 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 7 COMPLETED. CUM ITER = 79
 *** TIME = .696093E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6595E-05 OSCILLATION LIMIT = .5203
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.79 CRITERION= .3908
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8263E-01 CRITERION= .3877 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 8 COMPLETED. CUM ITER = 80
 *** TIME = .703982E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7739E-05 OSCILLATION LIMIT = .6105
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.47 CRITERION= .3900
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1167
 HT FLOW CONVERGENCE VALUE= .8898E-01 CRITERION= .3884 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 9 COMPLETED. CUM ITER = 81
 *** TIME = .711871E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6366E-05 OSCILLATION LIMIT = .5023
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.81 CRITERION= .3907
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8278E-01 CRITERION= .3876 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 10 COMPLETED. CUM ITER = 82
 *** TIME = .719761E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7371E-05 OSCILLATION LIMIT = .5815
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.48 CRITERION= .3899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1165
 HT FLOW CONVERGENCE VALUE= .8871E-01 CRITERION= .3883 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 11 COMPLETED. CUM ITER = 83
 *** TIME = .727650E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6150E-05 OSCILLATION LIMIT = .4852
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.83 CRITERION= .3906
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8285E-01 CRITERION= .3875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 12 COMPLETED. CUM ITER = 84
 *** TIME = .735540E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .7048E-05 OSCILLATION LIMIT = .5561
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.49 CRITERION= .3898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1163
 HT FLOW CONVERGENCE VALUE= .8849E-01 CRITERION= .3882 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 13 COMPLETED. CUM ITER = 85
 *** TIME = .743429E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5942E-05 OSCILLATION LIMIT = .4688
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.84 CRITERION= .3904
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8293E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 14 COMPLETED. CUM ITER = 86
 *** TIME = .751318E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6758E-05 OSCILLATION LIMIT = .5332
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.51 CRITERION= .3897
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1162
 HT FLOW CONVERGENCE VALUE= .8555E-01 CRITERION= .3880 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 15 COMPLETED. CUM ITER = 87
 *** TIME = .759208E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5744E-05 OSCILLATION LIMIT = .4532
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.86 CRITERION= .3903
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8001E-01 CRITERION= .3873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 16 COMPLETED. CUM ITER = 88
 *** TIME = .767097E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6499E-05 OSCILLATION LIMIT = .5128
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.52 CRITERION= .3896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1160
 HT FLOW CONVERGENCE VALUE= .8493E-01 CRITERION= .3879 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 17 COMPLETED. CUM ITER = 89
 *** TIME = .774987E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5564E-05 OSCILLATION LIMIT = .4390
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.88 CRITERION= .3902
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7992E-01 CRITERION= .3872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 18 COMPLETED. CUM ITER = 90
 *** TIME = .782876E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6261E-05 OSCILLATION LIMIT = .4939
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.53 CRITERION= .3895
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1158
 HT FLOW CONVERGENCE VALUE= .8491E-01 CRITERION= .3878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 19 COMPLETED. CUM ITER = 91
 *** TIME = .790765E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5387E-05 OSCILLATION LIMIT = .4250
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.90 CRITERION= .3901
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8025E-01 CRITERION= .3871 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 20 COMPLETED. CUM ITER = 92
 *** TIME = .798655E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6035E-05 OSCILLATION LIMIT = .4761
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.54 CRITERION= .3894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1157
 HT FLOW CONVERGENCE VALUE= .8480E-01 CRITERION= .3877 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 21 COMPLETED. CUM ITER = 93
 *** TIME = .806544E+07 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .5219E-05 OSCILLATION LIMIT = .4117
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED
 HT FLOW CONVERGENCE VALUE= 41.92 CRITERION= .3899
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .8031E-01 CRITERION= .3870 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 22 COMPLETED. CUM ITER = 94
 *** TIME = .814434E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5827E-05 OSCILLATION LIMIT = .4597
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.55 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .8442E-01 CRITERION= .3875 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 23 COMPLETED. CUM ITER = 95
 *** TIME = .822323E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5063E-05 OSCILLATION LIMIT = .3994
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.93 CRITERION= .3898
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7947E-01 CRITERION= .3868 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 24 COMPLETED. CUM ITER = 96
 *** TIME = .830212E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5634E-05 OSCILLATION LIMIT = .4445
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.57 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1154
 HT FLOW CONVERGENCE VALUE= .8297E-01 CRITERION= .3874 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 25 COMPLETED. CUM ITER = 97
 *** TIME = .838102E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4918E-05 OSCILLATION LIMIT = .3880
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.95 CRITERION= .3897
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7880E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 26 COMPLETED. CUM ITER = 98
 *** TIME = .845991E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5457E-05 OSCILLATION LIMIT = .4305
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.58 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1152
 HT FLOW CONVERGENCE VALUE= .8288E-01 CRITERION= .3873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 27 COMPLETED. CUM ITER = 99
 *** TIME = .853881E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4779E-05 OSCILLATION LIMIT = .3771
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.97 CRITERION= .3896
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7899E-01 CRITERION= .3866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 28 COMPLETED. CUM ITER = 100
 *** TIME = .861770E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5287E-05 OSCILLATION LIMIT = .4171
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.59 CRITERION= .3889
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1151
 HT FLOW CONVERGENCE VALUE= .8282E-01 CRITERION= .3872 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 29 COMPLETED. CUM ITER = 101
 *** TIME = .869659E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4646E-05 OSCILLATION LIMIT = .3665
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.99 CRITERION= .3894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7904E-01 CRITERION= .3865 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 30 COMPLETED. CUM ITER = 102
 *** TIME = .877549E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5127E-05 OSCILLATION LIMIT = .4045
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.60 CRITERION= .3888
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1150
 HT FLOW CONVERGENCE VALUE= .8261E-01 CRITERION= .3870 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 31 COMPLETED. CUM ITER = 103
 *** TIME = .885438E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4521E-05 OSCILLATION LIMIT = .3567
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.00 CRITERION= .3893
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7907E-01 CRITERION= .3864 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 32 COMPLETED. CUM ITER = 104
 *** TIME = .893328E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4977E-05 OSCILLATION LIMIT = .3927
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.62 CRITERION= .3887
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1148
 HT FLOW CONVERGENCE VALUE= .8263E-01 CRITERION= .3869 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 33 COMPLETED. CUM ITER = 105
 *** TIME = .901217E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4403E-05 OSCILLATION LIMIT = .3474
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.02 CRITERION= .3892
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7912E-01 CRITERION= .3863 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 34 COMPLETED. CUM ITER = 106
 *** TIME = .909106E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4836E-05 OSCILLATION LIMIT = .3815
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.63 CRITERION= .3886
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1147
 HT FLOW CONVERGENCE VALUE= .8261E-01 CRITERION= .3868 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 35 COMPLETED. CUM ITER = 107
 *** TIME = .916996E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4291E-05 OSCILLATION LIMIT = .3386
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.04 CRITERION= .3891
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1102
 HT FLOW CONVERGENCE VALUE= .7923E-01 CRITERION= .3862 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 6 SUBSTEP 36 COMPLETED. CUM ITER = 108
 *** TIME = .924885E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4703E-05 OSCILLATION LIMIT = .3710
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 42.64 CRITERION= .3885
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1146

HT FLOW CONVERGENCE VALUE= .8254E-01 CRITERION= .3867 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 37 COMPLETED. CUM ITER = 109
 *** TIME = .932775E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4186E-05 OSCILLATION LIMIT = .3302
 *** AUTO TIME STEP: NEXT TIME INC = 69783. DECREASED (FACTOR = .8845)

HT FLOW CONVERGENCE VALUE= 37.17 CRITERION= .3885
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .9749E-01
 HT FLOW CONVERGENCE VALUE= .6955E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 38 COMPLETED. CUM ITER = 110
 *** TIME = .939753E+07 TIME INC = 69782.8
 *** RESPONSE EIGENVALUE = .5530E-05 OSCILLATION LIMIT = .3859
 *** AUTO STEP TIME: NEXT TIME INC = 69783. UNCHANGED

HT FLOW CONVERGENCE VALUE= 37.77 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1017
 HT FLOW CONVERGENCE VALUE= .7291E-01 CRITERION= .3865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 6 SUBSTEP 39 COMPLETED. CUM ITER = 111
 *** TIME = .946731E+07 TIME INC = 69782.8
 *** RESPONSE EIGENVALUE = .4773E-05 OSCILLATION LIMIT = .3331

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:22:17 JUN 17, 1995 CP= 5636.780
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 32.01 CRITERION= .3879
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .6173E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 1 COMPLETED. CUM ITER = 112
 *** TIME = .954621E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4714E-05 OSCILLATION LIMIT = .3719
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.58 CRITERION= .3874
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8782E-01
 HT FLOW CONVERGENCE VALUE= .6171E-01 CRITERION= .3864 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 2 COMPLETED. CUM ITER = 113
 *** TIME = .962510E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6399E-05 OSCILLATION LIMIT = .5048
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.02 CRITERION= .3878
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5999E-01 CRITERION= .3859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 3 COMPLETED. CUM ITER = 114
 *** TIME = .970399E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5993E-05 OSCILLATION LIMIT = .4728
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.59 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8777E-01
 HT FLOW CONVERGENCE VALUE= .6235E-01 CRITERION= .3863 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 4 COMPLETED. CUM ITER = 115
 *** TIME = .978289E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5472E-05 OSCILLATION LIMIT = .4317
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.03 CRITERION= .3877
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5989E-01 CRITERION= .3858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 5 COMPLETED. CUM ITER = 116
 *** TIME = .986178E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5975E-05 OSCILLATION LIMIT = .4714
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.59 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8767E-01
 HT FLOW CONVERGENCE VALUE= .6235E-01 CRITERION= .3862 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 6 COMPLETED. CUM ITER = 117
 *** TIME = .994068E+07 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5322E-05 OSCILLATION LIMIT = .4199
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.04 CRITERION= .3876
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5983E-01 CRITERION= .3857 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 7 COMPLETED. CUM ITER = 118
 *** TIME = .100196E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5828E-05 OSCILLATION LIMIT = .4598
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.60 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8757E-01
 HT FLOW CONVERGENCE VALUE= .6196E-01 CRITERION= .3861 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 8 COMPLETED. CUM ITER = 119
 *** TIME = .100985E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5185E-05 OSCILLATION LIMIT = .4091
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.05 CRITERION= .3875
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5934E-01 CRITERION= .3856 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 9 COMPLETED. CUM ITER = 120
 *** TIME = .101774E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5691E-05 OSCILLATION LIMIT = .4490
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.61 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8747E-01
 HT FLOW CONVERGENCE VALUE= .6173E-01 CRITERION= .3860 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 10 COMPLETED. CUM ITER = 121
 *** TIME = .102563E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5061E-05 OSCILLATION LIMIT = .3993
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.06 CRITERION= .3873
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5933E-01 CRITERION= .3855 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 11 COMPLETED. CUM ITER = 122
 *** TIME = .103351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5557E-05 OSCILLATION LIMIT = .4384
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.61 CRITERION= .3868
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8738E-01
 HT FLOW CONVERGENCE VALUE= .6169E-01 CRITERION= .3859 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 12 COMPLETED. CUM ITER = 123
 *** TIME = .104140E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4943E-05 OSCILLATION LIMIT = .3900

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.07 CRITERION= .3872
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5933E-01 CRITERION= .3854 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 13 COMPLETED. CUM ITER = 124
 *** TIME = .104929E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5426E-05 OSCILLATION LIMIT = .4281
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.62 CRITERION= .3867
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8729E-01
 HT FLOW CONVERGENCE VALUE= .6145E-01 CRITERION= .3858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 14 COMPLETED. CUM ITER = 125
 *** TIME = .105718E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4832E-05 OSCILLATION LIMIT = .3812
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.08 CRITERION= .3871
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5933E-01 CRITERION= .3853 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 15 COMPLETED. CUM ITER = 126
 *** TIME = .106507E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5300E-05 OSCILLATION LIMIT = .4181
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.63 CRITERION= .3866
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8719E-01
 HT FLOW CONVERGENCE VALUE= .6156E-01 CRITERION= .3857 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 16 COMPLETED. CUM ITER = 127
 *** TIME = .107296E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4725E-05 OSCILLATION LIMIT = .3728
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.09 CRITERION= .3870
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5932E-01 CRITERION= .3852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 17 COMPLETED. CUM ITER = 128
 *** TIME = .108085E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5178E-05 OSCILLATION LIMIT = .4085
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.63 CRITERION= .3865
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8710E-01
 HT FLOW CONVERGENCE VALUE= .6152E-01 CRITERION= .3856 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 18 COMPLETED. CUM ITER = 129
 *** TIME = .108874E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4625E-05 OSCILLATION LIMIT = .3649
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.10 CRITERION= .3869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5934E-01 CRITERION= .3851 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 19 COMPLETED. CUM ITER = 130
 *** TIME = .109663E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5063E-05 OSCILLATION LIMIT = .3994
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.64 CRITERION= .3864
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8702E-01
 HT FLOW CONVERGENCE VALUE= .6136E-01 CRITERION= .3854 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 20 COMPLETED. CUM ITER = 131


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*** TIME = .110452E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4531E-05    OSCILLATION LIMIT = .3574
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.11    CRITERION= .3868
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
    HT FLOW CONVERGENCE VALUE= .5907E-01 CRITERION= .3850    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 21 COMPLETED.    CUM ITER = 132
*** TIME = .111241E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4954E-05    OSCILLATION LIMIT = .3909
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.65    CRITERION= .3863
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8693E-01
    HT FLOW CONVERGENCE VALUE= .6114E-01 CRITERION= .3853    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 22 COMPLETED.    CUM ITER = 133
*** TIME = .112030E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4444E-05    OSCILLATION LIMIT = .3506
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.12    CRITERION= .3867
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
    HT FLOW CONVERGENCE VALUE= .5909E-01 CRITERION= .3849    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 23 COMPLETED.    CUM ITER = 134
*** TIME = .112819E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4852E-05    OSCILLATION LIMIT = .3828
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.65    CRITERION= .3862
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8685E-01
    HT FLOW CONVERGENCE VALUE= .6114E-01 CRITERION= .3852    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 24 COMPLETED.    CUM ITER = 135
*** TIME = .113608E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4360E-05    OSCILLATION LIMIT = .3440
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.13    CRITERION= .3866
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
    HT FLOW CONVERGENCE VALUE= .5909E-01 CRITERION= .3847    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 25 COMPLETED.    CUM ITER = 136
*** TIME = .114397E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4753E-05    OSCILLATION LIMIT = .3750
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.66    CRITERION= .3861
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8677E-01
    HT FLOW CONVERGENCE VALUE= .6111E-01 CRITERION= .3851    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 26 COMPLETED.    CUM ITER = 137
*** TIME = .115186E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4278E-05    OSCILLATION LIMIT = .3375
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.14    CRITERION= .3865
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
    HT FLOW CONVERGENCE VALUE= .5913E-01 CRITERION= .3846    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 27 COMPLETED.    CUM ITER = 138
*** TIME = .115974E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4657E-05    OSCILLATION LIMIT = .3674
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 32.67    CRITERION= .3860
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8669E-01
    HT FLOW CONVERGENCE VALUE= .6101E-01 CRITERION= .3850    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 28 COMPLETED. CUM ITER = 139
*** TIME = .116763E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4201E-05 OSCILLATION LIMIT = .3314
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.15 CRITERION= .3863
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
HT FLOW CONVERGENCE VALUE= .5913E-01 CRITERION= .3845 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 29 COMPLETED. CUM ITER = 140
*** TIME = .117552E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4567E-05 OSCILLATION LIMIT = .3603
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .3859
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8661E-01
HT FLOW CONVERGENCE VALUE= .6095E-01 CRITERION= .3849 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 30 COMPLETED. CUM ITER = 141
*** TIME = .118341E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4127E-05 OSCILLATION LIMIT = .3256
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.17 CRITERION= .3862
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
HT FLOW CONVERGENCE VALUE= .5913E-01 CRITERION= .3844 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 31 COMPLETED. CUM ITER = 142
*** TIME = .119130E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4481E-05 OSCILLATION LIMIT = .3535
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.68 CRITERION= .3858
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8653E-01
HT FLOW CONVERGENCE VALUE= .6092E-01 CRITERION= .3848 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 32 COMPLETED. CUM ITER = 143
*** TIME = .119919E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4057E-05 OSCILLATION LIMIT = .3201
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.18 CRITERION= .3861
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
HT FLOW CONVERGENCE VALUE= .5915E-01 CRITERION= .3843 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 33 COMPLETED. CUM ITER = 144
*** TIME = .120708E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4399E-05 OSCILLATION LIMIT = .3471
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.69 CRITERION= .3857
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8646E-01
HT FLOW CONVERGENCE VALUE= .6088E-01 CRITERION= .3847 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 34 COMPLETED. CUM ITER = 145
*** TIME = .121497E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .3991E-05 OSCILLATION LIMIT = .3149
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.19 CRITERION= .3860
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
HT FLOW CONVERGENCE VALUE= .5916E-01 CRITERION= .3842 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 7 SUBSTEP 35 COMPLETED. CUM ITER = 146
*** TIME = .122286E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4321E-05 OSCILLATION LIMIT = .3409
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.70 CRITERION= .3856

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8639E-01
 HT FLOW CONVERGENCE VALUE= .6083E-01 CRITERION= .3845 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 36 COMPLETED. CUM ITER = 147
 *** TIME = .123075E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3928E-05 OSCILLATION LIMIT = .3099
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.20 CRITERION= .3859
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5920E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 37 COMPLETED. CUM ITER = 148
 *** TIME = .123864E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4247E-05 OSCILLATION LIMIT = .3350
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.70 CRITERION= .3855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8632E-01
 HT FLOW CONVERGENCE VALUE= .6084E-01 CRITERION= .3844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 38 COMPLETED. CUM ITER = 149
 *** TIME = .124653E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3867E-05 OSCILLATION LIMIT = .3051
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.21 CRITERION= .3858
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8404E-01
 HT FLOW CONVERGENCE VALUE= .5924E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 39 COMPLETED. CUM ITER = 150
 *** TIME = .125442E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4177E-05 OSCILLATION LIMIT = .3295
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 32.71 CRITERION= .3854
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .8625E-01
 HT FLOW CONVERGENCE VALUE= .6080E-01 CRITERION= .3843 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 7 SUBSTEP 40 COMPLETED. CUM ITER = 151
 *** TIME = .126231E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3811E-05 OSCILLATION LIMIT = .3007

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 22:59:21 JUN 17, 1995 CP= 7834.820
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 25.97 CRITERION= .3852
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4828E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 1 COMPLETED. CUM ITER = 152
 *** TIME = .127020E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4286E-05 OSCILLATION LIMIT = .3381
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.46 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6988E-01
 HT FLOW CONVERGENCE VALUE= .4805E-01 CRITERION= .3842 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 2 COMPLETED. CUM ITER = 153
 *** TIME = .127809E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5583E-05 OSCILLATION LIMIT = .4405
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.98 CRITERION= .3851
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4751E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 3 COMPLETED. CUM ITER = 154
 *** TIME = .128598E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5008E-05 OSCILLATION LIMIT = .3951
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.46 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6987E-01
 HT FLOW CONVERGENCE VALUE= .4856E-01 CRITERION= .3841 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 4 COMPLETED. CUM ITER = 155
 *** TIME = .129386E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4740E-05 OSCILLATION LIMIT = .3739
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.98 CRITERION= .3850
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4738E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 5 COMPLETED. CUM ITER = 156
 *** TIME = .130175E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5094E-05 OSCILLATION LIMIT = .4019
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.47 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6981E-01
 HT FLOW CONVERGENCE VALUE= .4855E-01 CRITERION= .3840 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 6 COMPLETED. CUM ITER = 157
 *** TIME = .130964E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4650E-05 OSCILLATION LIMIT = .3669
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.99 CRITERION= .3849
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4737E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 7 COMPLETED. CUM ITER = 158
 *** TIME = .131753E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5019E-05 OSCILLATION LIMIT = .3960
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.47 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6976E-01
 HT FLOW CONVERGENCE VALUE= .4857E-01 CRITERION= .3839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 8 COMPLETED. CUM ITER = 159
 *** TIME = .132542E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4575E-05 OSCILLATION LIMIT = .3609
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.00 CRITERION= .3848
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4738E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 9 COMPLETED. CUM ITER = 160
 *** TIME = .133331E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4947E-05 OSCILLATION LIMIT = .3903
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.48 CRITERION= .3844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6970E-01
 HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3838 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 10 COMPLETED. CUM ITER = 161
 *** TIME = .134120E+08 TIME INC = 78894.0

*** RESPONSE EIGENVALUE = .4505E-05 OSCILLATION LIMIT = .3554
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.00 CRITERION= .3847
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4736E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 11 COMPLETED. CUM ITER = 162
 *** TIME = .134909E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4876E-05 OSCILLATION LIMIT = .3847
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.48 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6965E-01
 HT FLOW CONVERGENCE VALUE= .4855E-01 CRITERION= .3837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 12 COMPLETED. CUM ITER = 163
 *** TIME = .135698E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4438E-05 OSCILLATION LIMIT = .3501
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.01 CRITERION= .3846
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4739E-01 CRITERION= .3833 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 13 COMPLETED. CUM ITER = 164
 *** TIME = .136487E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4804E-05 OSCILLATION LIMIT = .3790
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.48 CRITERION= .3843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6960E-01
 HT FLOW CONVERGENCE VALUE= .4853E-01 CRITERION= .3836 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 14 COMPLETED. CUM ITER = 165
 *** TIME = .137276E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4376E-05 OSCILLATION LIMIT = .3452
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .3845
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4738E-01 CRITERION= .3832 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 15 COMPLETED. CUM ITER = 166
 *** TIME = .138065E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4736E-05 OSCILLATION LIMIT = .3736
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.49 CRITERION= .3842
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6955E-01
 HT FLOW CONVERGENCE VALUE= .4850E-01 CRITERION= .3835 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 16 COMPLETED. CUM ITER = 167
 *** TIME = .138854E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4318E-05 OSCILLATION LIMIT = .3407
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.02 CRITERION= .3844
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4737E-01 CRITERION= .3831 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 17 COMPLETED. CUM ITER = 168
 *** TIME = .139643E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4670E-05 OSCILLATION LIMIT = .3684
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.49 CRITERION= .3841
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6950E-01
 HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3834 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP      8  SUBSTEP    18  COMPLETED.    CUM ITER =    169
*** TIME = .140432E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4263E-05    OSCILLATION LIMIT = .3364
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.03    CRITERION= .3843
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
    HT FLOW CONVERGENCE VALUE= .4737E-01    CRITERION= .3830    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    19  COMPLETED.    CUM ITER =    170
*** TIME = .141221E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4607E-05    OSCILLATION LIMIT = .3635
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.50    CRITERION= .3840
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6945E-01
    HT FLOW CONVERGENCE VALUE= .4856E-01    CRITERION= .3833    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    20  COMPLETED.    CUM ITER =    171
*** TIME = .142010E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4213E-05    OSCILLATION LIMIT = .3324
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.04    CRITERION= .3842
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
    HT FLOW CONVERGENCE VALUE= .4742E-01    CRITERION= .3829    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    21  COMPLETED.    CUM ITER =    172
*** TIME = .142798E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4547E-05    OSCILLATION LIMIT = .3588
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.50    CRITERION= .3839
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6940E-01
    HT FLOW CONVERGENCE VALUE= .4893E-01    CRITERION= .3832    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    22  COMPLETED.    CUM ITER =    173
*** TIME = .143587E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4165E-05    OSCILLATION LIMIT = .3286
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.05    CRITERION= .3841
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
    HT FLOW CONVERGENCE VALUE= .4846E-01    CRITERION= .3829    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    23  COMPLETED.    CUM ITER =    174
*** TIME = .144376E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4490E-05    OSCILLATION LIMIT = .3542
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.51    CRITERION= .3838
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6935E-01
    HT FLOW CONVERGENCE VALUE= .4943E-01    CRITERION= .3831    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    24  COMPLETED.    CUM ITER =    175
*** TIME = .145165E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4117E-05    OSCILLATION LIMIT = .3248
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.05    CRITERION= .3840
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
    HT FLOW CONVERGENCE VALUE= .4845E-01    CRITERION= .3828    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP      8  SUBSTEP    25  COMPLETED.    CUM ITER =    176
*** TIME = .145954E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4433E-05    OSCILLATION LIMIT = .3498
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 26.51    CRITERION= .3837
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6931E-01

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HT FLOW CONVERGENCE VALUE= .4947E-01 CRITERION= .3830 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 26 COMPLETED. CUM ITER = 177
 *** TIME = .146743E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4072E-05 OSCILLATION LIMIT = .3212
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.06 CRITERION= .3839
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3827 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 27 COMPLETED. CUM ITER = 178
 *** TIME = .147532E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4380E-05 OSCILLATION LIMIT = .3455
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6926E-01
 HT FLOW CONVERGENCE VALUE= .4945E-01 CRITERION= .3829 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 28 COMPLETED. CUM ITER = 179
 *** TIME = .148321E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4029E-05 OSCILLATION LIMIT = .3179
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.07 CRITERION= .3838
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 29 COMPLETED. CUM ITER = 180
 *** TIME = .149110E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4329E-05 OSCILLATION LIMIT = .3415
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.52 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6922E-01
 HT FLOW CONVERGENCE VALUE= .4943E-01 CRITERION= .3828 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 30 COMPLETED. CUM ITER = 181
 *** TIME = .149899E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3988E-05 OSCILLATION LIMIT = .3146
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.07 CRITERION= .3837
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4847E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 31 COMPLETED. CUM ITER = 182
 *** TIME = .150688E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4279E-05 OSCILLATION LIMIT = .3376
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.53 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6918E-01
 HT FLOW CONVERGENCE VALUE= .4939E-01 CRITERION= .3827 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 32 COMPLETED. CUM ITER = 183
 *** TIME = .151477E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3948E-05 OSCILLATION LIMIT = .3115
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.08 CRITERION= .3836
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4846E-01 CRITERION= .3824 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 33 COMPLETED. CUM ITER = 184
 *** TIME = .152266E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4232E-05 OSCILLATION LIMIT = .3339
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.53 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6914E-01
 HT FLOW CONVERGENCE VALUE= .4935E-01 CRITERION= .3826 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 34 COMPLETED. CUM ITER = 185
 *** TIME = .153055E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3911E-05 OSCILLATION LIMIT = .3085
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.09 CRITERION= .3835
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4842E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 35 COMPLETED. CUM ITER = 186
 *** TIME = .153844E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4187E-05 OSCILLATION LIMIT = .3303
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.53 CRITERION= .3832
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6910E-01
 HT FLOW CONVERGENCE VALUE= .4928E-01 CRITERION= .3825 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 36 COMPLETED. CUM ITER = 187
 *** TIME = .154633E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3875E-05 OSCILLATION LIMIT = .3057
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.09 CRITERION= .3834
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4841E-01 CRITERION= .3822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 37 COMPLETED. CUM ITER = 188
 *** TIME = .155421E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4144E-05 OSCILLATION LIMIT = .3269
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.54 CRITERION= .3831
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6907E-01
 HT FLOW CONVERGENCE VALUE= .4926E-01 CRITERION= .3824 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 38 COMPLETED. CUM ITER = 189
 *** TIME = .156210E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3841E-05 OSCILLATION LIMIT = .3031
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.10 CRITERION= .3833
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6794E-01
 HT FLOW CONVERGENCE VALUE= .4841E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 39 COMPLETED. CUM ITER = 190
 *** TIME = .156999E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4103E-05 OSCILLATION LIMIT = .3237
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 26.54 CRITERION= .3830
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6903E-01
 HT FLOW CONVERGENCE VALUE= .4923E-01 CRITERION= .3823 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 8 SUBSTEP 40 COMPLETED. CUM ITER = 191
 *** TIME = .157788E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .3809E-05 OSCILLATION LIMIT = .3005

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 23:36:22 JUN 17, 1995 CP= 10031.900
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .3829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4114E-01 CRITERION= .3820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 1 COMPLETED. CUM ITER = 192
 *** TIME = .158577E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4104E-05 OSCILLATION LIMIT = .3238
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.46 CRITERION= .3826
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5835E-01
 HT FLOW CONVERGENCE VALUE= .4079E-01 CRITERION= .3822 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 2 COMPLETED. CUM ITER = 193
 *** TIME = .159366E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5227E-05 OSCILLATION LIMIT = .4124
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.03 CRITERION= .3828
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4065E-01 CRITERION= .3819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 3 COMPLETED. CUM ITER = 194
 *** TIME = .160155E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4741E-05 OSCILLATION LIMIT = .3741
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.46 CRITERION= .3825
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5834E-01
 HT FLOW CONVERGENCE VALUE= .4115E-01 CRITERION= .3821 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 4 COMPLETED. CUM ITER = 195
 *** TIME = .160944E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4558E-05 OSCILLATION LIMIT = .3596
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.04 CRITERION= .3827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4058E-01 CRITERION= .3818 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 5 COMPLETED. CUM ITER = 196
 *** TIME = .161733E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4833E-05 OSCILLATION LIMIT = .3813
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.47 CRITERION= .3824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5832E-01
 HT FLOW CONVERGENCE VALUE= .4114E-01 CRITERION= .3820 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 6 COMPLETED. CUM ITER = 197
 *** TIME = .162522E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4505E-05 OSCILLATION LIMIT = .3554
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.04 CRITERION= .3826
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4055E-01 CRITERION= .3817 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 7 COMPLETED. CUM ITER = 198
 *** TIME = .163311E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4794E-05 OSCILLATION LIMIT = .3783
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.47 CRITERION= .3823
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5829E-01
 HT FLOW CONVERGENCE VALUE= .4114E-01 CRITERION= .3819 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 8 COMPLETED. CUM ITER = 199

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*** TIME = .164100E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4463E-05    OSCILLATION LIMIT = .3521
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.05    CRITERION= .3825
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
    HT FLOW CONVERGENCE VALUE= .4052E-01 CRITERION= .3816    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 9 COMPLETED. CUM ITER = 200
*** TIME = .164889E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4757E-05    OSCILLATION LIMIT = .3753
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.47    CRITERION= .3823
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5827E-01
    HT FLOW CONVERGENCE VALUE= .4110E-01 CRITERION= .3818    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 10 COMPLETED. CUM ITER = 201
*** TIME = .165678E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4425E-05    OSCILLATION LIMIT = .3491
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.05    CRITERION= .3824
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
    HT FLOW CONVERGENCE VALUE= .4050E-01 CRITERION= .3815    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 11 COMPLETED. CUM ITER = 202
*** TIME = .166467E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4718E-05    OSCILLATION LIMIT = .3722
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.48    CRITERION= .3822
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5824E-01
    HT FLOW CONVERGENCE VALUE= .4109E-01 CRITERION= .3817    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 12 COMPLETED. CUM ITER = 203
*** TIME = .167256E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4389E-05    OSCILLATION LIMIT = .3463
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.06    CRITERION= .3823
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
    HT FLOW CONVERGENCE VALUE= .4085E-01 CRITERION= .3814    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 13 COMPLETED. CUM ITER = 204
*** TIME = .168045E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4679E-05    OSCILLATION LIMIT = .3692
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.48    CRITERION= .3821
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5822E-01
    HT FLOW CONVERGENCE VALUE= .4145E-01 CRITERION= .3816    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 14 COMPLETED. CUM ITER = 205
*** TIME = .168833E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4355E-05    OSCILLATION LIMIT = .3436
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.06    CRITERION= .3822
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
    HT FLOW CONVERGENCE VALUE= .4083E-01 CRITERION= .3813    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 15 COMPLETED. CUM ITER = 206
*** TIME = .169622E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4641E-05    OSCILLATION LIMIT = .3662
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.48    CRITERION= .3820
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5820E-01
    HT FLOW CONVERGENCE VALUE= .4229E-01 CRITERION= .3815    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 16 COMPLETED. CUM ITER = 207
*** TIME = .170411E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4324E-05 OSCILLATION LIMIT = .3411
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.07 CRITERION= .3821
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
HT FLOW CONVERGENCE VALUE= .4252E-01 CRITERION= .3812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 17 COMPLETED. CUM ITER = 208
*** TIME = .171200E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4604E-05 OSCILLATION LIMIT = .3632
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.49 CRITERION= .3819
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5818E-01
HT FLOW CONVERGENCE VALUE= .4308E-01 CRITERION= .3814 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 18 COMPLETED. CUM ITER = 209
*** TIME = .171989E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4292E-05 OSCILLATION LIMIT = .3386
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.07 CRITERION= .3820
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
HT FLOW CONVERGENCE VALUE= .4250E-01 CRITERION= .3811 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 19 COMPLETED. CUM ITER = 210
*** TIME = .172778E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4568E-05 OSCILLATION LIMIT = .3604
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.49 CRITERION= .3818
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5817E-01
HT FLOW CONVERGENCE VALUE= .4303E-01 CRITERION= .3813 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 20 COMPLETED. CUM ITER = 211
*** TIME = .173567E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4264E-05 OSCILLATION LIMIT = .3364
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.08 CRITERION= .3819
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
HT FLOW CONVERGENCE VALUE= .4241E-01 CRITERION= .3810 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 21 COMPLETED. CUM ITER = 212
*** TIME = .174356E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4533E-05 OSCILLATION LIMIT = .3576
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.49 CRITERION= .3817
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5815E-01
HT FLOW CONVERGENCE VALUE= .4291E-01 CRITERION= .3812 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 22 COMPLETED. CUM ITER = 213
*** TIME = .175145E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4237E-05 OSCILLATION LIMIT = .3343
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.08 CRITERION= .3818
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
HT FLOW CONVERGENCE VALUE= .4235E-01 CRITERION= .3809 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 23 COMPLETED. CUM ITER = 214
*** TIME = .175934E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4500E-05 OSCILLATION LIMIT = .3550
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.49 CRITERION= .3816

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5813E-01
 HT FLOW CONVERGENCE VALUE= .4285E-01 CRITERION= .3811 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 24 COMPLETED. CUM ITER = 215
 *** TIME = .176723E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4211E-05 OSCILLATION LIMIT = .3323
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.09 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4228E-01 CRITERION= .3808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 25 COMPLETED. CUM ITER = 216
 *** TIME = .177512E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4468E-05 OSCILLATION LIMIT = .3525
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.50 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5811E-01
 HT FLOW CONVERGENCE VALUE= .4278E-01 CRITERION= .3810 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 26 COMPLETED. CUM ITER = 217
 *** TIME = .178301E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4187E-05 OSCILLATION LIMIT = .3303
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.09 CRITERION= .3816
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4225E-01 CRITERION= .3807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 27 COMPLETED. CUM ITER = 218
 *** TIME = .179090E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4436E-05 OSCILLATION LIMIT = .3500
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.50 CRITERION= .3814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5810E-01
 HT FLOW CONVERGENCE VALUE= .4273E-01 CRITERION= .3809 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 28 COMPLETED. CUM ITER = 219
 *** TIME = .179879E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4163E-05 OSCILLATION LIMIT = .3284
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.10 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4233E-01 CRITERION= .3806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 29 COMPLETED. CUM ITER = 220
 *** TIME = .180668E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4406E-05 OSCILLATION LIMIT = .3476
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.50 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5808E-01
 HT FLOW CONVERGENCE VALUE= .4284E-01 CRITERION= .3808 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 30 COMPLETED. CUM ITER = 221
 *** TIME = .181457E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4141E-05 OSCILLATION LIMIT = .3267
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.10 CRITERION= .3815
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4232E-01 CRITERION= .3805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 31 COMPLETED. CUM ITER = 222
 *** TIME = .182245E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4377E-05 OSCILLATION LIMIT = .3453
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.51 CRITERION= .3812
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5807E-01
 HT FLOW CONVERGENCE VALUE= .4304E-01 CRITERION= .3807 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 32 COMPLETED. CUM ITER = 223
 *** TIME = .183034E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4119E-05 OSCILLATION LIMIT = .3250
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.11 CRITERION= .3814
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4317E-01 CRITERION= .3805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 33 COMPLETED. CUM ITER = 224
 *** TIME = .183823E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4349E-05 OSCILLATION LIMIT = .3431
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.51 CRITERION= .3811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5805E-01
 HT FLOW CONVERGENCE VALUE= .4361E-01 CRITERION= .3806 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 34 COMPLETED. CUM ITER = 225
 *** TIME = .184612E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4097E-05 OSCILLATION LIMIT = .3232
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.11 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4312E-01 CRITERION= .3804 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 35 COMPLETED. CUM ITER = 226
 *** TIME = .185401E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4321E-05 OSCILLATION LIMIT = .3409
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.51 CRITERION= .3810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5804E-01
 HT FLOW CONVERGENCE VALUE= .4355E-01 CRITERION= .3805 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 36 COMPLETED. CUM ITER = 227
 *** TIME = .186190E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4077E-05 OSCILLATION LIMIT = .3216
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.12 CRITERION= .3812
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4310E-01 CRITERION= .3803 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 37 COMPLETED. CUM ITER = 228
 *** TIME = .186979E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4296E-05 OSCILLATION LIMIT = .3389
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.52 CRITERION= .3809
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5802E-01
 HT FLOW CONVERGENCE VALUE= .4353E-01 CRITERION= .3804 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 38 COMPLETED. CUM ITER = 229
 *** TIME = .187768E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4058E-05 OSCILLATION LIMIT = .3202
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 22.12 CRITERION= .3811
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5738E-01
 HT FLOW CONVERGENCE VALUE= .4309E-01 CRITERION= .3802 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 9 SUBSTEP 39 COMPLETED. CUM ITER = 230
 *** TIME = .188557E+08 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .4271E-05  OSCILLATION LIMIT = .3370
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 22.52      CRITERION= .3808
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .5801E-01
    HT FLOW CONVERGENCE VALUE= .4348E-01  CRITERION= .3803    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 9 SUBSTEP 40 COMPLETED.  CUM ITER = 231
*** TIME = .189346E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4040E-05  OSCILLATION LIMIT = .3187

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX  00:13:30  JUN 18, 1995 CP= 12232.070
FOR SUPPORT CALL ROBERT BAHNEY  PHONE (702) 794-5337  FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 18.98      CRITERION= .3808
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4938E-01
    HT FLOW CONVERGENCE VALUE= .3717E-01  CRITERION= .3801    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 1 COMPLETED.  CUM ITER = 232
*** TIME = .190135E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4227E-05  OSCILLATION LIMIT = .3335
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 19.37      CRITERION= .3806
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4993E-01
    HT FLOW CONVERGENCE VALUE= .3665E-01  CRITERION= .3802    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 2 COMPLETED.  CUM ITER = 233
*** TIME = .190924E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5369E-05  OSCILLATION LIMIT = .4236
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 18.99      CRITERION= .3807
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4938E-01
    HT FLOW CONVERGENCE VALUE= .3670E-01  CRITERION= .3800    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 3 COMPLETED.  CUM ITER = 234
*** TIME = .191713E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4848E-05  OSCILLATION LIMIT = .3825
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 19.38      CRITERION= .3805
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4993E-01
    HT FLOW CONVERGENCE VALUE= .3684E-01  CRITERION= .3801    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 4 COMPLETED.  CUM ITER = 235
*** TIME = .192502E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4750E-05  OSCILLATION LIMIT = .3748
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 18.99      CRITERION= .3806
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4938E-01
    HT FLOW CONVERGENCE VALUE= .3660E-01  CRITERION= .3799    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 5 COMPLETED.  CUM ITER = 236
*** TIME = .193291E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4951E-05  OSCILLATION LIMIT = .3906
*** AUTO STEP TIME:  NEXT TIME INC = 78894.    UNCHANGED

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    HT FLOW CONVERGENCE VALUE= 19.38      CRITERION= .3804
    EQUIL ITER 1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= .4992E-01
    HT FLOW CONVERGENCE VALUE= .3680E-01  CRITERION= .3800    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 10 SUBSTEP 6 COMPLETED. CUM ITER = 237
*** TIME = .194080E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4714E-05 OSCILLATION LIMIT = .3719
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 18.99 CRITERION= .3805
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
HT FLOW CONVERGENCE VALUE= .3655E-01 CRITERION= .3798 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 7 COMPLETED. CUM ITER = 238
*** TIME = .194868E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4930E-05 OSCILLATION LIMIT = .3889
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.38 CRITERION= .3803
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4990E-01
HT FLOW CONVERGENCE VALUE= .3677E-01 CRITERION= .3799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 8 COMPLETED. CUM ITER = 239
*** TIME = .195657E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4688E-05 OSCILLATION LIMIT = .3699
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.00 CRITERION= .3804
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
HT FLOW CONVERGENCE VALUE= .3652E-01 CRITERION= .3797 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 9 COMPLETED. CUM ITER = 240
*** TIME = .196446E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4909E-05 OSCILLATION LIMIT = .3873
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.38 CRITERION= .3802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4989E-01
HT FLOW CONVERGENCE VALUE= .3675E-01 CRITERION= .3799 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 10 COMPLETED. CUM ITER = 241
*** TIME = .197235E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4665E-05 OSCILLATION LIMIT = .3681
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.00 CRITERION= .3803
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
HT FLOW CONVERGENCE VALUE= .3649E-01 CRITERION= .3796 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 11 COMPLETED. CUM ITER = 242
*** TIME = .198024E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4888E-05 OSCILLATION LIMIT = .3856
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.39 CRITERION= .3801
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4988E-01
HT FLOW CONVERGENCE VALUE= .3673E-01 CRITERION= .3798 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 12 COMPLETED. CUM ITER = 243
*** TIME = .198813E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4645E-05 OSCILLATION LIMIT = .3665
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.00 CRITERION= .3802
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
HT FLOW CONVERGENCE VALUE= .3647E-01 CRITERION= .3795 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 13 COMPLETED. CUM ITER = 244
*** TIME = .199602E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4866E-05 OSCILLATION LIMIT = .3839
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.39 CRITERION= .3800
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4987E-01

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HT FLOW CONVERGENCE VALUE= .3672E-01 CRITERION= .3797 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 14 COMPLETED. CUM ITER = 245
 *** TIME = .200391E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4626E-05 OSCILLATION LIMIT = .3650
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.01 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3644E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 15 COMPLETED. CUM ITER = 246
 *** TIME = .201180E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4844E-05 OSCILLATION LIMIT = .3822
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.39 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4986E-01
 HT FLOW CONVERGENCE VALUE= .3663E-01 CRITERION= .3796 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 16 COMPLETED. CUM ITER = 247
 *** TIME = .201969E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4608E-05 OSCILLATION LIMIT = .3635
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.01 CRITERION= .3801
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3639E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 17 COMPLETED. CUM ITER = 248
 *** TIME = .202758E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4822E-05 OSCILLATION LIMIT = .3804
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.39 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4985E-01
 HT FLOW CONVERGENCE VALUE= .3661E-01 CRITERION= .3795 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 18 COMPLETED. CUM ITER = 249
 *** TIME = .203547E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4591E-05 OSCILLATION LIMIT = .3622
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.02 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3634E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 19 COMPLETED. CUM ITER = 250
 *** TIME = .204336E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4800E-05 OSCILLATION LIMIT = .3787
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.39 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4984E-01
 HT FLOW CONVERGENCE VALUE= .3656E-01 CRITERION= .3794 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 20 COMPLETED. CUM ITER = 251
 *** TIME = .205125E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4574E-05 OSCILLATION LIMIT = .3609
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.02 CRITERION= .3799
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3631E-01 CRITERION= .3792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 21 COMPLETED. CUM ITER = 252
 *** TIME = .205914E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4779E-05 OSCILLATION LIMIT = .3770
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.40 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4983E-01
 HT FLOW CONVERGENCE VALUE= .3650E-01 CRITERION= .3793 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 22 COMPLETED. CUM ITER = 253
 *** TIME = .206703E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4559E-05 OSCILLATION LIMIT = .3597
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.02 CRITERION= .3798
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3625E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 23 COMPLETED. CUM ITER = 254
 *** TIME = .207492E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4759E-05 OSCILLATION LIMIT = .3754
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.40 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4982E-01
 HT FLOW CONVERGENCE VALUE= .3645E-01 CRITERION= .3792 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 24 COMPLETED. CUM ITER = 255
 *** TIME = .208280E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4545E-05 OSCILLATION LIMIT = .3586
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.03 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3619E-01 CRITERION= .3790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 25 COMPLETED. CUM ITER = 256
 *** TIME = .209069E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4739E-05 OSCILLATION LIMIT = .3738
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.40 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4981E-01
 HT FLOW CONVERGENCE VALUE= .3636E-01 CRITERION= .3791 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 26 COMPLETED. CUM ITER = 257
 *** TIME = .209858E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4531E-05 OSCILLATION LIMIT = .3575
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.03 CRITERION= .3796
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3614E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 27 COMPLETED. CUM ITER = 258
 *** TIME = .210647E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4719E-05 OSCILLATION LIMIT = .3723
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.40 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4980E-01
 HT FLOW CONVERGENCE VALUE= .3632E-01 CRITERION= .3790 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 28 COMPLETED. CUM ITER = 259
 *** TIME = .211436E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4517E-05 OSCILLATION LIMIT = .3563
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.03 CRITERION= .3795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3611E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 29 COMPLETED. CUM ITER = 260
 *** TIME = .212225E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4700E-05 OSCILLATION LIMIT = .3708

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.41 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4979E-01
 HT FLOW CONVERGENCE VALUE= .3628E-01 CRITERION= .3789 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 30 COMPLETED. CUM ITER = 261
 *** TIME = .213014E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4504E-05 OSCILLATION LIMIT = .3553
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.04 CRITERION= .3794
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3607E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 31 COMPLETED. CUM ITER = 262
 *** TIME = .213803E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4682E-05 OSCILLATION LIMIT = .3694
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.41 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4978E-01
 HT FLOW CONVERGENCE VALUE= .3624E-01 CRITERION= .3788 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 32 COMPLETED. CUM ITER = 263
 *** TIME = .214592E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4491E-05 OSCILLATION LIMIT = .3543
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.04 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3604E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 33 COMPLETED. CUM ITER = 264
 *** TIME = .215381E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4665E-05 OSCILLATION LIMIT = .3680
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.41 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4977E-01
 HT FLOW CONVERGENCE VALUE= .3618E-01 CRITERION= .3787 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 34 COMPLETED. CUM ITER = 265
 *** TIME = .216170E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4478E-05 OSCILLATION LIMIT = .3533
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.04 CRITERION= .3792
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3593E-01 CRITERION= .3785 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 35 COMPLETED. CUM ITER = 266
 *** TIME = .216959E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4647E-05 OSCILLATION LIMIT = .3666
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.41 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4976E-01
 HT FLOW CONVERGENCE VALUE= .3605E-01 CRITERION= .3786 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 36 COMPLETED. CUM ITER = 267
 *** TIME = .217748E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4466E-05 OSCILLATION LIMIT = .3524
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.05 CRITERION= .3791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
 HT FLOW CONVERGENCE VALUE= .3585E-01 CRITERION= .3784 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 10 SUBSTEP 37 COMPLETED. CUM ITER = 268

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*** TIME = .218537E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4631E-05    OSCILLATION LIMIT = .3653
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

HT FLOW CONVERGENCE VALUE= 19.42    CRITERION= .3789
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4975E-01
HT FLOW CONVERGENCE VALUE= .3599E-01 CRITERION= .3786    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 38 COMPLETED. CUM ITER = 269
*** TIME = .219326E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4455E-05    OSCILLATION LIMIT = .3515
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 19.05    CRITERION= .3790
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4938E-01
HT FLOW CONVERGENCE VALUE= .3583E-01 CRITERION= .3783    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 39 COMPLETED. CUM ITER = 270
*** TIME = .220115E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4615E-05    OSCILLATION LIMIT = .3641
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 19.42    CRITERION= .3788
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4974E-01
HT FLOW CONVERGENCE VALUE= .3599E-01 CRITERION= .3785    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 10 SUBSTEP 40 COMPLETED. CUM ITER = 271
*** TIME = .220904E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4444E-05    OSCILLATION LIMIT = .3506

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303    VERSION=HP 9000/7XX    00:50:35 JUN 18, 1995 CP= 14431.580
FOR SUPPORT CALL ROBERT BAHNEY    PHONE (702) 794-5337    FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 16.21    CRITERION= .3788
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3064E-01 CRITERION= .3783    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 1 COMPLETED. CUM ITER = 272
*** TIME = .221692E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .4629E-05    OSCILLATION LIMIT = .3652
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 16.57    CRITERION= .3786
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4228E-01
HT FLOW CONVERGENCE VALUE= .3001E-01 CRITERION= .3784    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 2 COMPLETED. CUM ITER = 273
*** TIME = .222481E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6115E-05    OSCILLATION LIMIT = .4824
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 16.21    CRITERION= .3787
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3030E-01 CRITERION= .3782    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 3 COMPLETED. CUM ITER = 274
*** TIME = .223270E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5382E-05    OSCILLATION LIMIT = .4246
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

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HT FLOW CONVERGENCE VALUE= 16.57    CRITERION= .3785
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4228E-01
HT FLOW CONVERGENCE VALUE= .3022E-01 CRITERION= .3783    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 4 COMPLETED. CUM ITER = 275
*** TIME = .224059E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5390E-05 OSCILLATION LIMIT = .4252
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.22 CRITERION= .3786
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3023E-01 CRITERION= .3781 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 5 COMPLETED. CUM ITER = 276
*** TIME = .224848E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5516E-05 OSCILLATION LIMIT = .4352
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.57 CRITERION= .3785
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4228E-01
HT FLOW CONVERGENCE VALUE= .3022E-01 CRITERION= .3782 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 6 COMPLETED. CUM ITER = 277
*** TIME = .225637E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5359E-05 OSCILLATION LIMIT = .4228
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.22 CRITERION= .3785
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3020E-01 CRITERION= .3780 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 7 COMPLETED. CUM ITER = 278
*** TIME = .226426E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5504E-05 OSCILLATION LIMIT = .4342
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3784
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4228E-01
HT FLOW CONVERGENCE VALUE= .3021E-01 CRITERION= .3781 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 8 COMPLETED. CUM ITER = 279
*** TIME = .227215E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5339E-05 OSCILLATION LIMIT = .4212
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.22 CRITERION= .3785
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3017E-01 CRITERION= .3779 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 9 COMPLETED. CUM ITER = 280
*** TIME = .228004E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5492E-05 OSCILLATION LIMIT = .4333
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3783
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4227E-01
HT FLOW CONVERGENCE VALUE= .3019E-01 CRITERION= .3780 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 10 COMPLETED. CUM ITER = 281
*** TIME = .228793E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5322E-05 OSCILLATION LIMIT = .4199
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.23 CRITERION= .3784
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
HT FLOW CONVERGENCE VALUE= .3015E-01 CRITERION= .3778 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 11 COMPLETED. CUM ITER = 282
*** TIME = .229582E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5479E-05 OSCILLATION LIMIT = .4323
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3782

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4227E-01
 HT FLOW CONVERGENCE VALUE= .3019E-01 CRITERION= .3779 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 12 COMPLETED. CUM ITER = 283
 *** TIME = .230371E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5307E-05 OSCILLATION LIMIT = .4187
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.23 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3014E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 13 COMPLETED. CUM ITER = 284
 *** TIME = .231160E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5465E-05 OSCILLATION LIMIT = .4311
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4227E-01
 HT FLOW CONVERGENCE VALUE= .3017E-01 CRITERION= .3778 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 14 COMPLETED. CUM ITER = 285
 *** TIME = .231949E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5293E-05 OSCILLATION LIMIT = .4176
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.23 CRITERION= .3782
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3010E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 15 COMPLETED. CUM ITER = 286
 *** TIME = .232738E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5450E-05 OSCILLATION LIMIT = .4300
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4226E-01
 HT FLOW CONVERGENCE VALUE= .3013E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 16 COMPLETED. CUM ITER = 287
 *** TIME = .233527E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5282E-05 OSCILLATION LIMIT = .4167
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.23 CRITERION= .3781
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3009E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 17 COMPLETED. CUM ITER = 288
 *** TIME = .234315E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5435E-05 OSCILLATION LIMIT = .4288
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.58 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4226E-01
 HT FLOW CONVERGENCE VALUE= .3013E-01 CRITERION= .3777 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 18 COMPLETED. CUM ITER = 289
 *** TIME = .235104E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5270E-05 OSCILLATION LIMIT = .4157
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.24 CRITERION= .3780
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3009E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 19 COMPLETED. CUM ITER = 290
 *** TIME = .235893E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5420E-05 OSCILLATION LIMIT = .4276
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.59 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4225E-01
 HT FLOW CONVERGENCE VALUE= .3013E-01 CRITERION= .3776 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 20 COMPLETED. CUM ITER = 291
 *** TIME = .236682E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5259E-05 OSCILLATION LIMIT = .4149
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.24 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3009E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 21 COMPLETED. CUM ITER = 292
 *** TIME = .237471E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5405E-05 OSCILLATION LIMIT = .4264
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.59 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4225E-01
 HT FLOW CONVERGENCE VALUE= .3012E-01 CRITERION= .3775 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 22 COMPLETED. CUM ITER = 293
 *** TIME = .238260E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5247E-05 OSCILLATION LIMIT = .4140
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.24 CRITERION= .3778
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3008E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 23 COMPLETED. CUM ITER = 294
 *** TIME = .239049E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5391E-05 OSCILLATION LIMIT = .4253
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.59 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4225E-01
 HT FLOW CONVERGENCE VALUE= .3011E-01 CRITERION= .3774 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 24 COMPLETED. CUM ITER = 295
 *** TIME = .239838E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5237E-05 OSCILLATION LIMIT = .4131
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.24 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3772 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 25 COMPLETED. CUM ITER = 296
 *** TIME = .240627E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5376E-05 OSCILLATION LIMIT = .4241
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.59 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4224E-01
 HT FLOW CONVERGENCE VALUE= .3010E-01 CRITERION= .3773 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 26 COMPLETED. CUM ITER = 297
 *** TIME = .241416E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5226E-05 OSCILLATION LIMIT = .4123
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.25 CRITERION= .3777
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3771 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 11 SUBSTEP 27 COMPLETED. CUM ITER = 298
 *** TIME = .242205E+08 TIME INC = 78894.0

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*** RESPONSE EIGENVALUE = .5362E-05  OSCILLATION LIMIT = .4230
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.59    CRITERION= .3775
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4224E-01
    HT FLOW CONVERGENCE VALUE= .3010E-01 CRITERION= .3772    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 28 COMPLETED. CUM ITER = 299
*** TIME = .242994E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5216E-05  OSCILLATION LIMIT = .4115
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.25    CRITERION= .3776
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
    HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3770    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 29 COMPLETED. CUM ITER = 300
*** TIME = .243783E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5348E-05  OSCILLATION LIMIT = .4219
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.59    CRITERION= .3774
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4224E-01
    HT FLOW CONVERGENCE VALUE= .3009E-01 CRITERION= .3771    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 30 COMPLETED. CUM ITER = 301
*** TIME = .244572E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5206E-05  OSCILLATION LIMIT = .4108
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.25    CRITERION= .3775
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
    HT FLOW CONVERGENCE VALUE= .3006E-01 CRITERION= .3769    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 31 COMPLETED. CUM ITER = 302
*** TIME = .245361E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5335E-05  OSCILLATION LIMIT = .4209
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.60    CRITERION= .3773
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4223E-01
    HT FLOW CONVERGENCE VALUE= .3008E-01 CRITERION= .3770    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 32 COMPLETED. CUM ITER = 303
*** TIME = .246150E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5197E-05  OSCILLATION LIMIT = .4100
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.26    CRITERION= .3774
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
    HT FLOW CONVERGENCE VALUE= .3006E-01 CRITERION= .3769    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 33 COMPLETED. CUM ITER = 304
*** TIME = .246939E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5322E-05  OSCILLATION LIMIT = .4198
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.60    CRITERION= .3772
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4223E-01
    HT FLOW CONVERGENCE VALUE= .3008E-01 CRITERION= .3769    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 11 SUBSTEP 34 COMPLETED. CUM ITER = 305
*** TIME = .247727E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5187E-05  OSCILLATION LIMIT = .4093
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 16.26    CRITERION= .3773
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
    HT FLOW CONVERGENCE VALUE= .3006E-01 CRITERION= .3768    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 11 SUBSTEP 35 COMPLETED. CUM ITER = 306
 *** TIME = .248516E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5309E-05 OSCILLATION LIMIT = .4188
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.60 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4223E-01
 HT FLOW CONVERGENCE VALUE= .3008E-01 CRITERION= .3769 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 36 COMPLETED. CUM ITER = 307
 *** TIME = .249305E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5178E-05 OSCILLATION LIMIT = .4085
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.26 CRITERION= .3772
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 37 COMPLETED. CUM ITER = 308
 *** TIME = .250094E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5296E-05 OSCILLATION LIMIT = .4178
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.60 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4222E-01
 HT FLOW CONVERGENCE VALUE= .3008E-01 CRITERION= .3768 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 38 COMPLETED. CUM ITER = 309
 *** TIME = .250883E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5169E-05 OSCILLATION LIMIT = .4078
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.26 CRITERION= .3771
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4193E-01
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3766 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 39 COMPLETED. CUM ITER = 310
 *** TIME = .251672E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5283E-05 OSCILLATION LIMIT = .4168
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 16.60 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .4222E-01
 HT FLOW CONVERGENCE VALUE= .3007E-01 CRITERION= .3767 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 11 SUBSTEP 40 COMPLETED. CUM ITER = 311
 *** TIME = .252461E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5160E-05 OSCILLATION LIMIT = .4071

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 01:27:45 JUN 18, 1995 CP= 16632.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 14.38 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2666E-01 CRITERION= .3765 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 12 SUBSTEP 1 COMPLETED. CUM ITER = 312
 *** TIME = .253250E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5355E-05 OSCILLATION LIMIT = .4225
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.71 CRITERION= .3768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3738E-01


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HT FLOW CONVERGENCE VALUE= .2617E-01 CRITERION= .3766 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 2 COMPLETED. CUM ITER = 313
*** TIME = .254039E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6601E-05 OSCILLATION LIMIT = .5208
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.38 CRITERION= .3769
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2645E-01 CRITERION= .3764 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 3 COMPLETED. CUM ITER = 314
*** TIME = .254828E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5983E-05 OSCILLATION LIMIT = .4720
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.71 CRITERION= .3767
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3738E-01
HT FLOW CONVERGENCE VALUE= .2632E-01 CRITERION= .3765 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 4 COMPLETED. CUM ITER = 315
*** TIME = .255617E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6021E-05 OSCILLATION LIMIT = .4750
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.38 CRITERION= .3768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2641E-01 CRITERION= .3763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 5 COMPLETED. CUM ITER = 316
*** TIME = .256406E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6092E-05 OSCILLATION LIMIT = .4806
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3766
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3738E-01
HT FLOW CONVERGENCE VALUE= .2632E-01 CRITERION= .3764 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 6 COMPLETED. CUM ITER = 317
*** TIME = .257195E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5996E-05 OSCILLATION LIMIT = .4730
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.38 CRITERION= .3767
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2640E-01 CRITERION= .3763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 7 COMPLETED. CUM ITER = 318
*** TIME = .257984E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6083E-05 OSCILLATION LIMIT = .4799
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3765
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3738E-01
HT FLOW CONVERGENCE VALUE= .2632E-01 CRITERION= .3763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 8 COMPLETED. CUM ITER = 319
*** TIME = .258773E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5981E-05 OSCILLATION LIMIT = .4718
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.39 CRITERION= .3766
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2638E-01 CRITERION= .3762 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 9 COMPLETED. CUM ITER = 320
*** TIME = .259562E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6075E-05 OSCILLATION LIMIT = .4793
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

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HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3738E-01
 HT FLOW CONVERGENCE VALUE= .2631E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 10 COMPLETED. CUM ITER = 321
 *** TIME = .260351E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5967E-05 OSCILLATION LIMIT = .4708
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.39 CRITERION= .3765
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2637E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 11 COMPLETED. CUM ITER = 322
 *** TIME = .261139E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6066E-05 OSCILLATION LIMIT = .4785
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3737E-01
 HT FLOW CONVERGENCE VALUE= .2631E-01 CRITERION= .3762 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 12 COMPLETED. CUM ITER = 323
 *** TIME = .261928E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5956E-05 OSCILLATION LIMIT = .4699
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.39 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2636E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 13 COMPLETED. CUM ITER = 324
 *** TIME = .262717E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6055E-05 OSCILLATION LIMIT = .4777
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3737E-01
 HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .3761 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 14 COMPLETED. CUM ITER = 325
 *** TIME = .263506E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5945E-05 OSCILLATION LIMIT = .4691
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.39 CRITERION= .3764
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2636E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 15 COMPLETED. CUM ITER = 326
 *** TIME = .264295E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6044E-05 OSCILLATION LIMIT = .4768
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3737E-01
 HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .3760 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 16 COMPLETED. CUM ITER = 327
 *** TIME = .265084E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5935E-05 OSCILLATION LIMIT = .4683
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.40 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2636E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 17 COMPLETED. CUM ITER = 328
 *** TIME = .265873E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6032E-05 OSCILLATION LIMIT = .4759

*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3737E-01
 HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .3759 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 18 COMPLETED. CUM ITER = 329
 *** TIME = .266662E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5926E-05 OSCILLATION LIMIT = .4675
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.40 CRITERION= .3762
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2636E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 19 COMPLETED. CUM ITER = 330
 *** TIME = .267451E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6021E-05 OSCILLATION LIMIT = .4750
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.72 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3736E-01
 HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .3758 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 20 COMPLETED. CUM ITER = 331
 *** TIME = .268240E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5917E-05 OSCILLATION LIMIT = .4668
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.40 CRITERION= .3761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2635E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 21 COMPLETED. CUM ITER = 332
 *** TIME = .269029E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6009E-05 OSCILLATION LIMIT = .4741
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.73 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3736E-01
 HT FLOW CONVERGENCE VALUE= .2629E-01 CRITERION= .3757 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 22 COMPLETED. CUM ITER = 333
 *** TIME = .269818E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5908E-05 OSCILLATION LIMIT = .4661
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.40 CRITERION= .3760
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2635E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 23 COMPLETED. CUM ITER = 334
 *** TIME = .270607E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5998E-05 OSCILLATION LIMIT = .4732
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.73 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3736E-01
 HT FLOW CONVERGENCE VALUE= .2629E-01 CRITERION= .3756 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 24 COMPLETED. CUM ITER = 335
 *** TIME = .271396E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .5900E-05 OSCILLATION LIMIT = .4655
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.40 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
 HT FLOW CONVERGENCE VALUE= .2634E-01 CRITERION= .3755 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 12 SUBSTEP 25 COMPLETED. CUM ITER = 336

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*** TIME = .272185E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5988E-05    OSCILLATION LIMIT = .4724
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.73    CRITERION= .3758
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3736E-01
    HT FLOW CONVERGENCE VALUE= .2628E-01 CRITERION= .3756    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 26 COMPLETED. CUM ITER = 337
*** TIME = .272974E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5892E-05    OSCILLATION LIMIT = .4649
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.41    CRITERION= .3758
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
    HT FLOW CONVERGENCE VALUE= .2634E-01 CRITERION= .3754    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 27 COMPLETED. CUM ITER = 338
*** TIME = .273762E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5977E-05    OSCILLATION LIMIT = .4716
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.73    CRITERION= .3757
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3735E-01
    HT FLOW CONVERGENCE VALUE= .2628E-01 CRITERION= .3755    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 28 COMPLETED. CUM ITER = 339
*** TIME = .274551E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5885E-05    OSCILLATION LIMIT = .4643
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.41    CRITERION= .3757
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
    HT FLOW CONVERGENCE VALUE= .2633E-01 CRITERION= .3753    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 29 COMPLETED. CUM ITER = 340
*** TIME = .275340E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5967E-05    OSCILLATION LIMIT = .4707
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.73    CRITERION= .3756
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3735E-01
    HT FLOW CONVERGENCE VALUE= .2626E-01 CRITERION= .3754    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 30 COMPLETED. CUM ITER = 341
*** TIME = .276129E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5877E-05    OSCILLATION LIMIT = .4636
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.41    CRITERION= .3757
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
    HT FLOW CONVERGENCE VALUE= .2632E-01 CRITERION= .3752    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 31 COMPLETED. CUM ITER = 342
*** TIME = .276918E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5956E-05    OSCILLATION LIMIT = .4699
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.73    CRITERION= .3755
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3735E-01
    HT FLOW CONVERGENCE VALUE= .2626E-01 CRITERION= .3753    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 32 COMPLETED. CUM ITER = 343
*** TIME = .277707E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5869E-05    OSCILLATION LIMIT = .4630
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 14.41    CRITERION= .3756
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
    HT FLOW CONVERGENCE VALUE= .2631E-01 CRITERION= .3751    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 33 COMPLETED. CUM ITER = 344
*** TIME = .278496E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5946E-05 OSCILLATION LIMIT = .4691
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.73 CRITERION= .3754
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3735E-01
HT FLOW CONVERGENCE VALUE= .2625E-01 CRITERION= .3752 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 34 COMPLETED. CUM ITER = 345
*** TIME = .279285E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5861E-05 OSCILLATION LIMIT = .4624
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.41 CRITERION= .3755
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2631E-01 CRITERION= .3751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 35 COMPLETED. CUM ITER = 346
*** TIME = .280074E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5935E-05 OSCILLATION LIMIT = .4682
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.73 CRITERION= .3753
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3735E-01
HT FLOW CONVERGENCE VALUE= .2624E-01 CRITERION= .3751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 36 COMPLETED. CUM ITER = 347
*** TIME = .280863E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5853E-05 OSCILLATION LIMIT = .4618
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.42 CRITERION= .3754
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2630E-01 CRITERION= .3750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 37 COMPLETED. CUM ITER = 348
*** TIME = .281652E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5925E-05 OSCILLATION LIMIT = .4675
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.74 CRITERION= .3753
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3734E-01
HT FLOW CONVERGENCE VALUE= .2623E-01 CRITERION= .3750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 38 COMPLETED. CUM ITER = 349
*** TIME = .282441E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5846E-05 OSCILLATION LIMIT = .4612
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.42 CRITERION= .3753
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3706E-01
HT FLOW CONVERGENCE VALUE= .2629E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 39 COMPLETED. CUM ITER = 350
*** TIME = .283230E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5915E-05 OSCILLATION LIMIT = .4667
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 14.74 CRITERION= .3752
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3734E-01
HT FLOW CONVERGENCE VALUE= .2622E-01 CRITERION= .3750 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 12 SUBSTEP 40 COMPLETED. CUM ITER = 351
*** TIME = .284019E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .5839E-05 OSCILLATION LIMIT = .4606
Apply loads and solve for 1 to 9 years

*DO LOOP ON PARAMETER= TM FROM .31558E+08 TO .28402E+09 BY .31558E+08

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TIME= .31558E+08

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION: 1
6169.91289 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 123.22 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 124.26 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 126.87 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 18836.330 TIME= 02:05:07
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 02:05:07 JUN 18, 1995 CP= 18836.330
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 13
TIME AT END OF THE LOAD STEP.31558E+08
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000

OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 13.12 CRITERION= .3752
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2397E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 1 COMPLETED. CUM ITER = 352
*** TIME = .284808E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6010E-05 OSCILLATION LIMIT = .4742
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.44 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3409E-01
HT FLOW CONVERGENCE VALUE= .2357E-01 CRITERION= .3749 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 2 COMPLETED. CUM ITER = 353
*** TIME = .285597E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .7042E-05 OSCILLATION LIMIT = .5556
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.12 CRITERION= .3751
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2383E-01 CRITERION= .3747 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 3 COMPLETED. CUM ITER = 354
*** TIME = .286386E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6519E-05 OSCILLATION LIMIT = .5143
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.44 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3409E-01
HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3748 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 4 COMPLETED. CUM ITER = 355
*** TIME = .287174E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6583E-05 OSCILLATION LIMIT = .5193
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.12 CRITERION= .3750
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2380E-01 CRITERION= .3746 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 5 COMPLETED. CUM ITER = 356
*** TIME = .287963E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6606E-05 OSCILLATION LIMIT = .5211
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.44 CRITERION= .3749
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3747 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 6 COMPLETED. CUM ITER = 357
*** TIME = .288752E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6562E-05 OSCILLATION LIMIT = .5177
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.13 CRITERION= .3749
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2380E-01 CRITERION= .3746 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 7 COMPLETED. CUM ITER = 358
*** TIME = .289541E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6599E-05 OSCILLATION LIMIT = .5206

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*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3748
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
  HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3746    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 8 COMPLETED.    CUM ITER = 359
*** TIME = .290330E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6549E-05    OSCILLATION LIMIT = .5167
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.13    CRITERION= .3749
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
  HT FLOW CONVERGENCE VALUE= .2379E-01 CRITERION= .3745    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 9 COMPLETED.    CUM ITER = 360
*** TIME = .291119E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6592E-05    OSCILLATION LIMIT = .5201
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3747
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
  HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3745    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 10 COMPLETED.    CUM ITER = 361
*** TIME = .291908E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6538E-05    OSCILLATION LIMIT = .5158
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.13    CRITERION= .3748
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
  HT FLOW CONVERGENCE VALUE= .2378E-01 CRITERION= .3744    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 11 COMPLETED.    CUM ITER = 362
*** TIME = .292697E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6584E-05    OSCILLATION LIMIT = .5194
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3746
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
  HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3745    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 12 COMPLETED.    CUM ITER = 363
*** TIME = .293486E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6528E-05    OSCILLATION LIMIT = .5150
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.13    CRITERION= .3747
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
  HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .3743    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 13 COMPLETED.    CUM ITER = 364
*** TIME = .294275E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6575E-05    OSCILLATION LIMIT = .5188
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3745
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
  HT FLOW CONVERGENCE VALUE= .2367E-01 CRITERION= .3744    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 14 COMPLETED.    CUM ITER = 365
*** TIME = .295064E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6519E-05    OSCILLATION LIMIT = .5143
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

  HT FLOW CONVERGENCE VALUE= 13.13    CRITERION= .3746
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
  HT FLOW CONVERGENCE VALUE= .2377E-01 CRITERION= .3742    <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 15 COMPLETED.    CUM ITER = 366

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*** TIME = .295853E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6566E-05    OSCILLATION LIMIT = .5180
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3745
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3408E-01
    HT FLOW CONVERGENCE VALUE= .2366E-01    CRITERION= .3743    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 16 COMPLETED. CUM ITER = 367
*** TIME = .296642E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6510E-05    OSCILLATION LIMIT = .5136
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.14    CRITERION= .3745
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
    HT FLOW CONVERGENCE VALUE= .2376E-01    CRITERION= .3741    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 17 COMPLETED. CUM ITER = 368
*** TIME = .297431E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6557E-05    OSCILLATION LIMIT = .5173
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3744
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
    HT FLOW CONVERGENCE VALUE= .2366E-01    CRITERION= .3742    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 18 COMPLETED. CUM ITER = 369
*** TIME = .298220E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6502E-05    OSCILLATION LIMIT = .5130
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.14    CRITERION= .3744
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
    HT FLOW CONVERGENCE VALUE= .2376E-01    CRITERION= .3741    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 19 COMPLETED. CUM ITER = 370
*** TIME = .299009E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6548E-05    OSCILLATION LIMIT = .5166
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.44    CRITERION= .3743
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
    HT FLOW CONVERGENCE VALUE= .2365E-01    CRITERION= .3741    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 20 COMPLETED. CUM ITER = 371
*** TIME = .299798E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6494E-05    OSCILLATION LIMIT = .5124
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.14    CRITERION= .3743
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
    HT FLOW CONVERGENCE VALUE= .2375E-01    CRITERION= .3740    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 21 COMPLETED. CUM ITER = 372
*** TIME = .300586E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6538E-05    OSCILLATION LIMIT = .5158
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.45    CRITERION= .3742
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
    HT FLOW CONVERGENCE VALUE= .2365E-01    CRITERION= .3740    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 22 COMPLETED. CUM ITER = 373
*** TIME = .301375E+08    TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6487E-05    OSCILLATION LIMIT = .5117
*** AUTO STEP TIME: NEXT TIME INC = 78894.    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 13.14    CRITERION= .3743
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
    HT FLOW CONVERGENCE VALUE= .2375E-01    CRITERION= .3739    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 23 COMPLETED. CUM ITER = 374
*** TIME = .302164E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6529E-05 OSCILLATION LIMIT = .5151
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3741
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
HT FLOW CONVERGENCE VALUE= .2365E-01 CRITERION= .3739 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 24 COMPLETED. CUM ITER = 375
*** TIME = .302953E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6479E-05 OSCILLATION LIMIT = .5112
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.14 CRITERION= .3742
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2374E-01 CRITERION= .3738 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 25 COMPLETED. CUM ITER = 376
*** TIME = .303742E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6520E-05 OSCILLATION LIMIT = .5144
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3740
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
HT FLOW CONVERGENCE VALUE= .2363E-01 CRITERION= .3739 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 26 COMPLETED. CUM ITER = 377
*** TIME = .304531E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6472E-05 OSCILLATION LIMIT = .5106
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.14 CRITERION= .3741
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .3737 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 27 COMPLETED. CUM ITER = 378
*** TIME = .305320E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6511E-05 OSCILLATION LIMIT = .5137
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3740
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
HT FLOW CONVERGENCE VALUE= .2363E-01 CRITERION= .3738 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 28 COMPLETED. CUM ITER = 379
*** TIME = .306109E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6465E-05 OSCILLATION LIMIT = .5100
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.15 CRITERION= .3740
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .3736 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 29 COMPLETED. CUM ITER = 380
*** TIME = .306898E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6502E-05 OSCILLATION LIMIT = .5130
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3739
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3407E-01
HT FLOW CONVERGENCE VALUE= .2363E-01 CRITERION= .3737 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 13 SUBSTEP 30 COMPLETED. CUM ITER = 381
*** TIME = .307687E+08 TIME INC = 78894.0
*** RESPONSE EIGENVALUE = .6457E-05 OSCILLATION LIMIT = .5094
*** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.15 CRITERION= .3739

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
 HT FLOW CONVERGENCE VALUE= .2373E-01 CRITERION= .3736 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 31 COMPLETED. CUM ITER = 382
 *** TIME = .308476E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6493E-05 OSCILLATION LIMIT = .5123
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3406E-01
 HT FLOW CONVERGENCE VALUE= .2362E-01 CRITERION= .3736 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 32 COMPLETED. CUM ITER = 383
 *** TIME = .309265E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6450E-05 OSCILLATION LIMIT = .5089
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.15 CRITERION= .3738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
 HT FLOW CONVERGENCE VALUE= .2372E-01 CRITERION= .3735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 33 COMPLETED. CUM ITER = 384
 *** TIME = .310054E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6484E-05 OSCILLATION LIMIT = .5116
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3737
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3406E-01
 HT FLOW CONVERGENCE VALUE= .2362E-01 CRITERION= .3735 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 34 COMPLETED. CUM ITER = 385
 *** TIME = .310843E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6444E-05 OSCILLATION LIMIT = .5084
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.15 CRITERION= .3738
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
 HT FLOW CONVERGENCE VALUE= .2371E-01 CRITERION= .3734 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 35 COMPLETED. CUM ITER = 386
 *** TIME = .311632E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6476E-05 OSCILLATION LIMIT = .5109
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3736
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3406E-01
 HT FLOW CONVERGENCE VALUE= .2361E-01 CRITERION= .3734 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 36 COMPLETED. CUM ITER = 387
 *** TIME = .312421E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6436E-05 OSCILLATION LIMIT = .5078
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.15 CRITERION= .3737
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
 HT FLOW CONVERGENCE VALUE= .2371E-01 CRITERION= .3733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 37 COMPLETED. CUM ITER = 388
 *** TIME = .313209E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6467E-05 OSCILLATION LIMIT = .5102
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.45 CRITERION= .3735
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3406E-01
 HT FLOW CONVERGENCE VALUE= .2361E-01 CRITERION= .3734 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 38 COMPLETED. CUM ITER = 389
 *** TIME = .313998E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6430E-05 OSCILLATION LIMIT = .5073
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.16 CRITERION= .3736
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3386E-01
 HT FLOW CONVERGENCE VALUE= .2370E-01 CRITERION= .3732 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 39 COMPLETED. CUM ITER = 390
 *** TIME = .314787E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6459E-05 OSCILLATION LIMIT = .5095
 *** AUTO STEP TIME: NEXT TIME INC = 78894. UNCHANGED

HT FLOW CONVERGENCE VALUE= 13.46 CRITERION= .3735
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .3406E-01
 HT FLOW CONVERGENCE VALUE= .2360E-01 CRITERION= .3733 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 13 SUBSTEP 40 COMPLETED. CUM ITER = 391
 *** TIME = .315576E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .6423E-05 OSCILLATION LIMIT = .5067

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 02:42:18 JUN 18, 1995 CP= 21039.880
 FOR SUPPORT CALL ROBERT BAHNEY. PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 85.43 CRITERION= .3829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1551 CRITERION= .3730 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 1 COMPLETED. CUM ITER = 392
 *** TIME = .323466E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .4999E-05 OSCILLATION LIMIT = 3.944
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.75 CRITERION= .3827
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1461 CRITERION= .3727 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 2 COMPLETED. CUM ITER = 393
 *** TIME = .331355E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .1022E-04 OSCILLATION LIMIT = 8.059
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.49 CRITERION= .3824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1474 CRITERION= .3723 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 3 COMPLETED. CUM ITER = 394
 *** TIME = .339245E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .8918E-05 OSCILLATION LIMIT = 7.036
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.81 CRITERION= .3820
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1461 CRITERION= .3720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 4 COMPLETED. CUM ITER = 395
 *** TIME = .347134E+08 TIME INC = 78894.0
 *** RESPONSE EIGENVALUE = .9631E-05 OSCILLATION LIMIT = 7.598
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.55 CRITERION= .3817
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1471 CRITERION= .3716 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 5 COMPLETED. CUM ITER = 396
 *** TIME = .355023E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9004E-05 OSCILLATION LIMIT = 7.103
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.87 CRITERION= .3813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1460 CRITERION= .3713 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 6 COMPLETED. CUM ITER = 397
 *** TIME = .362913E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9526E-05 OSCILLATION LIMIT = 7.515
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.60 CRITERION= .3810
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1467 CRITERION= .3709 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 7 COMPLETED. CUM ITER = 398
 *** TIME = .370802E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9044E-05 OSCILLATION LIMIT = 7.135
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.93 CRITERION= .3806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1458 CRITERION= .3706 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 8 COMPLETED. CUM ITER = 399
 *** TIME = .378692E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9441E-05 OSCILLATION LIMIT = 7.449
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.66 CRITERION= .3804
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1464 CRITERION= .3701 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 9 COMPLETED. CUM ITER = 400
 *** TIME = .386581E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9069E-05 OSCILLATION LIMIT = 7.155
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.98 CRITERION= .3800
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1455 CRITERION= .3699 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 10 COMPLETED. CUM ITER = 401
 *** TIME = .394470E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9372E-05 OSCILLATION LIMIT = 7.394
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.72 CRITERION= .3797
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1460 CRITERION= .3694 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 11 COMPLETED. CUM ITER = 402
 *** TIME = .402360E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9081E-05 OSCILLATION LIMIT = 7.164
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.04 CRITERION= .3793
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1452 CRITERION= .3692 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 14 SUBSTEP 12 COMPLETED. CUM ITER = 403
 *** TIME = .410249E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9313E-05 OSCILLATION LIMIT = 7.348
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.78 CRITERION= .3790
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183

HT FLOW CONVERGENCE VALUE= .1456 CRITERION= .3687 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 13 COMPLETED. CUM ITER = 404
 *** TIME = .418139E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9084E-05 OSCILLATION LIMIT = 7.167
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.10 CRITERION= .3786
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1450 CRITERION= .3685 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 14 COMPLETED. CUM ITER = 405
 *** TIME = .426028E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9262E-05 OSCILLATION LIMIT = 7.307
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.84 CRITERION= .3783
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1454 CRITERION= .3680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 15 COMPLETED. CUM ITER = 406
 *** TIME = .433917E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9079E-05 OSCILLATION LIMIT = 7.163
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.16 CRITERION= .3779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1448 CRITERION= .3677 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 16 COMPLETED. CUM ITER = 407
 *** TIME = .441807E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9217E-05 OSCILLATION LIMIT = 7.272
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.90 CRITERION= .3776
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1452 CRITERION= .3673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 17 COMPLETED. CUM ITER = 408
 *** TIME = .449696E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9069E-05 OSCILLATION LIMIT = 7.155
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.22 CRITERION= .3773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1446 CRITERION= .3670 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 18 COMPLETED. CUM ITER = 409
 *** TIME = .457586E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9176E-05 OSCILLATION LIMIT = 7.240
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.96 CRITERION= .3770
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1449 CRITERION= .3666 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 19 COMPLETED. CUM ITER = 410
 *** TIME = .465475E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9056E-05 OSCILLATION LIMIT = 7.145
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.28 CRITERION= .3766
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1443 CRITERION= .3663 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 20 COMPLETED. CUM ITER = 411
 *** TIME = .473364E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9140E-05 OSCILLATION LIMIT = 7.211
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.02 CRITERION= .3763
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1446 CRITERION= .3659 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 21 COMPLETED. CUM ITER = 412
 *** TIME = .481254E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9040E-05 OSCILLATION LIMIT = 7.132
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.34 CRITERION= .3759
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1441 CRITERION= .3656 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 22 COMPLETED. CUM ITER = 413
 *** TIME = .489143E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9108E-05 OSCILLATION LIMIT = 7.186
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.08 CRITERION= .3756
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1444 CRITERION= .3652 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 23 COMPLETED. CUM ITER = 414
 *** TIME = .497033E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9024E-05 OSCILLATION LIMIT = 7.119
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.40 CRITERION= .3752
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1438 CRITERION= .3649 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 24 COMPLETED. CUM ITER = 415
 *** TIME = .504922E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9075E-05 OSCILLATION LIMIT = 7.160
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.13 CRITERION= .3749
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1441 CRITERION= .3645 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 25 COMPLETED. CUM ITER = 416
 *** TIME = .512811E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9003E-05 OSCILLATION LIMIT = 7.103
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.46 CRITERION= .3746
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1436 CRITERION= .3642 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 26 COMPLETED. CUM ITER = 417
 *** TIME = .520701E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9045E-05 OSCILLATION LIMIT = 7.136
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.19 CRITERION= .3743
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1439 CRITERION= .3638 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 27 COMPLETED. CUM ITER = 418
 *** TIME = .528590E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8981E-05 OSCILLATION LIMIT = 7.085
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.51 CRITERION= .3739
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1434 CRITERION= .3635 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 28 COMPLETED. CUM ITER = 419
 *** TIME = .536480E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .9016E-05 OSCILLATION LIMIT = 7.113

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.25 CRITERION= .3736
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1436 CRITERION= .3631 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 29 COMPLETED. CUM ITER = 420
 *** TIME = .544369E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8959E-05 OSCILLATION LIMIT = 7.068
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.57 CRITERION= .3732
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1432 CRITERION= .3628 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 30 COMPLETED. CUM ITER = 421
 *** TIME = .552258E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8988E-05 OSCILLATION LIMIT = 7.091
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.31 CRITERION= .3729
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1433 CRITERION= .3624 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 31 COMPLETED. CUM ITER = 422
 *** TIME = .560148E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8938E-05 OSCILLATION LIMIT = 7.052
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.63 CRITERION= .3725
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1428 CRITERION= .3621 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 32 COMPLETED. CUM ITER = 423
 *** TIME = .568037E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8963E-05 OSCILLATION LIMIT = 7.071
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.37 CRITERION= .3723
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1430 CRITERION= .3617 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 33 COMPLETED. CUM ITER = 424
 *** TIME = .575927E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8916E-05 OSCILLATION LIMIT = 7.034
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.69 CRITERION= .3719
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1425 CRITERION= .3614 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 34 COMPLETED. CUM ITER = 425
 *** TIME = .583816E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8937E-05 OSCILLATION LIMIT = 7.050
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.43 CRITERION= .3716
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1427 CRITERION= .3610 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 35 COMPLETED. CUM ITER = 426
 *** TIME = .591705E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .8893E-05 OSCILLATION LIMIT = 7.016
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 86.75 CRITERION= .3712
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
 HT FLOW CONVERGENCE VALUE= .1423 CRITERION= .3607 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 14 SUBSTEP 36 COMPLETED. CUM ITER = 427


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*** TIME = .599595E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8910E-05    OSCILLATION LIMIT = 7.030
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 86.49    CRITERION= .3709
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
    HT FLOW CONVERGENCE VALUE= .1425    CRITERION= .3602    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 37 COMPLETED. CUM ITER = 428
*** TIME = .607484E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8869E-05    OSCILLATION LIMIT = 6.997
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 86.81    CRITERION= .3705
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
    HT FLOW CONVERGENCE VALUE= .1420    CRITERION= .3600    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 38 COMPLETED. CUM ITER = 429
*** TIME = .615374E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8884E-05    OSCILLATION LIMIT = 7.009
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 86.55    CRITERION= .3702
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
    HT FLOW CONVERGENCE VALUE= .1421    CRITERION= .3595    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 39 COMPLETED. CUM ITER = 430
*** TIME = .623263E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8846E-05    OSCILLATION LIMIT = 6.979
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 86.87    CRITERION= .3699
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2183
    HT FLOW CONVERGENCE VALUE= .1417    CRITERION= .3593    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 14 SUBSTEP 40 COMPLETED. CUM ITER = 431
*** TIME = .631152E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .8860E-05    OSCILLATION LIMIT = 6.990

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303    VERSION=HP 9000/7XX    03:19:27 JUN 18, 1995 CP= 23242.570
FOR SUPPORT CALL ROBERT BAHNEY    PHONE (702) 794-5337    FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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    HT FLOW CONVERGENCE VALUE= 45.60    CRITERION= .3622
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
    HT FLOW CONVERGENCE VALUE= .6827E-01    CRITERION= .3589    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 1 COMPLETED. CUM ITER = 432
*** TIME = .639042E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2722E-04    OSCILLATION LIMIT = 21.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 45.89    CRITERION= .3618
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
    HT FLOW CONVERGENCE VALUE= .6862E-01    CRITERION= .3586    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 2 COMPLETED. CUM ITER = 433
*** TIME = .646931E+08    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2472E-04    OSCILLATION LIMIT = 19.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 45.62    CRITERION= .3615
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
    HT FLOW CONVERGENCE VALUE= .7069E-01    CRITERION= .3583    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 3 COMPLETED. CUM ITER = 434
*** TIME = .654821E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1846E-04 OSCILLATION LIMIT = 14.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.91 CRITERION= .3612
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .6864E-01 CRITERION= .3580 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 4 COMPLETED. CUM ITER = 435
*** TIME = .662710E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2452E-04 OSCILLATION LIMIT = 19.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.63 CRITERION= .3609
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .7037E-01 CRITERION= .3577 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 5 COMPLETED. CUM ITER = 436
*** TIME = .670599E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1912E-04 OSCILLATION LIMIT = 15.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.93 CRITERION= .3606
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .6868E-01 CRITERION= .3574 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 6 COMPLETED. CUM ITER = 437
*** TIME = .678489E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2379E-04 OSCILLATION LIMIT = 18.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.65 CRITERION= .3603
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .7009E-01 CRITERION= .3571 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 7 COMPLETED. CUM ITER = 438
*** TIME = .686378E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .1965E-04 OSCILLATION LIMIT = 15.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.94 CRITERION= .3600
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .6868E-01 CRITERION= .3569 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 8 COMPLETED. CUM ITER = 439
*** TIME = .694268E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2323E-04 OSCILLATION LIMIT = 18.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.67 CRITERION= .3598
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .6986E-01 CRITERION= .3565 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 9 COMPLETED. CUM ITER = 440
*** TIME = .702157E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2004E-04 OSCILLATION LIMIT = 15.81
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.96 CRITERION= .3594
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
HT FLOW CONVERGENCE VALUE= .6866E-01 CRITERION= .3563 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 10 COMPLETED. CUM ITER = 441
*** TIME = .710046E+08 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2281E-04 OSCILLATION LIMIT = 17.99
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.68 CRITERION= .3592

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6966E-01 CRITERION= .3559 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 11 COMPLETED. CUM ITER = 442
 *** TIME = .717936E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2034E-04 OSCILLATION LIMIT = 16.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.98 CRITERION= .3589
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6863E-01 CRITERION= .3557 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 12 COMPLETED. CUM ITER = 443
 *** TIME = .725825E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2248E-04 OSCILLATION LIMIT = 17.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.70 CRITERION= .3586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6948E-01 CRITERION= .3553 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 13 COMPLETED. CUM ITER = 444
 *** TIME = .733715E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2056E-04 OSCILLATION LIMIT = 16.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.99 CRITERION= .3583
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6857E-01 CRITERION= .3551 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 14 COMPLETED. CUM ITER = 445
 *** TIME = .741604E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2223E-04 OSCILLATION LIMIT = 17.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.72 CRITERION= .3580
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6932E-01 CRITERION= .3547 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 15 COMPLETED. CUM ITER = 446
 *** TIME = .749493E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2072E-04 OSCILLATION LIMIT = 16.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.01 CRITERION= .3577
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6849E-01 CRITERION= .3545 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 16 COMPLETED. CUM ITER = 447
 *** TIME = .757383E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2203E-04 OSCILLATION LIMIT = 17.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.73 CRITERION= .3575
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6915E-01 CRITERION= .3542 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 17 COMPLETED. CUM ITER = 448
 *** TIME = .765272E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2083E-04 OSCILLATION LIMIT = 16.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.02 CRITERION= .3571
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6840E-01 CRITERION= .3539 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 18 COMPLETED. CUM ITER = 449
 *** TIME = .773162E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2188E-04 OSCILLATION LIMIT = 17.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.75 CRITERION= .3569
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6901E-01 CRITERION= .3536 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 19 COMPLETED. CUM ITER = 450
 *** TIME = .781051E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2092E-04 OSCILLATION LIMIT = 16.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.04 CRITERION= .3565
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6831E-01 CRITERION= .3533 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 20 COMPLETED. CUM ITER = 451
 *** TIME = .788940E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2175E-04 OSCILLATION LIMIT = 17.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.77 CRITERION= .3563
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6886E-01 CRITERION= .3530 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 21 COMPLETED. CUM ITER = 452
 *** TIME = .796830E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2097E-04 OSCILLATION LIMIT = 16.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.06 CRITERION= .3560
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6821E-01 CRITERION= .3528 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 22 COMPLETED. CUM ITER = 453
 *** TIME = .804719E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2165E-04 OSCILLATION LIMIT = 17.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.78 CRITERION= .3557
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6872E-01 CRITERION= .3524 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 23 COMPLETED. CUM ITER = 454
 *** TIME = .812609E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2101E-04 OSCILLATION LIMIT = 16.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.07 CRITERION= .3554
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6811E-01 CRITERION= .3522 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 24 COMPLETED. CUM ITER = 455
 *** TIME = .820498E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2156E-04 OSCILLATION LIMIT = 17.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.80 CRITERION= .3551
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6859E-01 CRITERION= .3518 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 25 COMPLETED. CUM ITER = 456
 *** TIME = .828387E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2103E-04 OSCILLATION LIMIT = 16.59
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.09 CRITERION= .3548
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6801E-01 CRITERION= .3516 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 15 SUBSTEP 26 COMPLETED. CUM ITER = 457
 *** TIME = .836277E+08 TIME INC = 788940.

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*** RESPONSE EIGENVALUE = .2149E-04  OSCILLATION LIMIT = 16.96
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 45.82  CRITERION= .3546
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6847E-01 CRITERION= .3512  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 27 COMPLETED. CUM ITER = 458
*** TIME = .844166E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2104E-04  OSCILLATION LIMIT = 16.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 46.11  CRITERION= .3542
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6791E-01 CRITERION= .3510  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 28 COMPLETED. CUM ITER = 459
*** TIME = .852056E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2143E-04  OSCILLATION LIMIT = 16.91
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 45.83  CRITERION= .3540
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6835E-01 CRITERION= .3506  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 29 COMPLETED. CUM ITER = 460
*** TIME = .859945E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2104E-04  OSCILLATION LIMIT = 16.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 46.12  CRITERION= .3536
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6780E-01 CRITERION= .3504  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 30 COMPLETED. CUM ITER = 461
*** TIME = .867834E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2138E-04  OSCILLATION LIMIT = 16.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 45.85  CRITERION= .3534
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6822E-01 CRITERION= .3500  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 31 COMPLETED. CUM ITER = 462
*** TIME = .875724E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2104E-04  OSCILLATION LIMIT = 16.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 46.14  CRITERION= .3531
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6771E-01 CRITERION= .3498  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 32 COMPLETED. CUM ITER = 463
*** TIME = .883613E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2133E-04  OSCILLATION LIMIT = 16.83
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 45.86  CRITERION= .3528
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6811E-01 CRITERION= .3495  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 15 SUBSTEP 33 COMPLETED. CUM ITER = 464
*** TIME = .891503E+08  TIME INC = 788940.
*** RESPONSE EIGENVALUE = .2103E-04  OSCILLATION LIMIT = 16.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 46.16  CRITERION= .3525
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
  HT FLOW CONVERGENCE VALUE= .6760E-01 CRITERION= .3492  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 15 SUBSTEP 34 COMPLETED. CUM ITER = 465
 *** TIME = .899392E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2129E-04 OSCILLATION LIMIT = 16.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.88 CRITERION= .3522
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6800E-01 CRITERION= .3489 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 35 COMPLETED. CUM ITER = 466
 *** TIME = .907281E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2101E-04 OSCILLATION LIMIT = 16.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.17 CRITERION= .3519
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6750E-01 CRITERION= .3487 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 36 COMPLETED. CUM ITER = 467
 *** TIME = .915171E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2125E-04 OSCILLATION LIMIT = 16.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.90 CRITERION= .3517
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6789E-01 CRITERION= .3483 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 37 COMPLETED. CUM ITER = 468
 *** TIME = .923060E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2100E-04 OSCILLATION LIMIT = 16.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.19 CRITERION= .3513
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6741E-01 CRITERION= .3481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 38 COMPLETED. CUM ITER = 469
 *** TIME = .930950E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2121E-04 OSCILLATION LIMIT = 16.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 45.91 CRITERION= .3511
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6777E-01 CRITERION= .3477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 39 COMPLETED. CUM ITER = 470
 *** TIME = .938839E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2098E-04 OSCILLATION LIMIT = 16.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 46.20 CRITERION= .3507
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1155
 HT FLOW CONVERGENCE VALUE= .6729E-01 CRITERION= .3475 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 15 SUBSTEP 40 COMPLETED. CUM ITER = 471
 *** TIME = .946728E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .2117E-04 OSCILLATION LIMIT = 16.71

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 03:56:47 JUN 18, 1995 CP= 25448.130
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 29.82 CRITERION= .3488
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01

HT FLOW CONVERGENCE VALUE= .4151E-01 CRITERION= .3471 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 1 COMPLETED. CUM ITER = 472
 *** TIME = .954618E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .4061E-04 OSCILLATION LIMIT = 32.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.11 CRITERION= .3484
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4131E-01 CRITERION= .3470 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 2 COMPLETED. CUM ITER = 473
 *** TIME = .962507E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3943E-04 OSCILLATION LIMIT = 31.11
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.83 CRITERION= .3482
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4212E-01 CRITERION= .3466 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 3 COMPLETED. CUM ITER = 474
 *** TIME = .970397E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3504E-04 OSCILLATION LIMIT = 27.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.11 CRITERION= .3479
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4129E-01 CRITERION= .3464 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 4 COMPLETED. CUM ITER = 475
 *** TIME = .978286E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3930E-04 OSCILLATION LIMIT = 31.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .3477
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4201E-01 CRITERION= .3461 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 5 COMPLETED. CUM ITER = 476
 *** TIME = .986175E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3547E-04 OSCILLATION LIMIT = 27.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.12 CRITERION= .3474
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4126E-01 CRITERION= .3459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 6 COMPLETED. CUM ITER = 477
 *** TIME = .994065E+08 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3885E-04 OSCILLATION LIMIT = 30.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.84 CRITERION= .3472
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4191E-01 CRITERION= .3456 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 7 COMPLETED. CUM ITER = 478
 *** TIME = .100195E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3582E-04 OSCILLATION LIMIT = 28.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.13 CRITERION= .3469
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4123E-01 CRITERION= .3454 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 8 COMPLETED. CUM ITER = 479
 *** TIME = .100984E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3850E-04 OSCILLATION LIMIT = 30.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.85 CRITERION= .3467
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4182E-01 CRITERION= .3451 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 9 COMPLETED. CUM ITER = 480
 *** TIME = .101773E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3608E-04 OSCILLATION LIMIT = 28.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.13 CRITERION= .3464
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4119E-01 CRITERION= .3449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 10 COMPLETED. CUM ITER = 481
 *** TIME = .102562E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3822E-04 OSCILLATION LIMIT = 30.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.86 CRITERION= .3462
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4173E-01 CRITERION= .3446 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 11 COMPLETED. CUM ITER = 482
 *** TIME = .103351E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3627E-04 OSCILLATION LIMIT = 28.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.14 CRITERION= .3459
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4114E-01 CRITERION= .3444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 12 COMPLETED. CUM ITER = 483
 *** TIME = .104140E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3801E-04 OSCILLATION LIMIT = 29.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.86 CRITERION= .3457
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4165E-01 CRITERION= .3441 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 13 COMPLETED. CUM ITER = 484
 *** TIME = .104929E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3641E-04 OSCILLATION LIMIT = 28.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.15 CRITERION= .3454
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4110E-01 CRITERION= .3439 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 14 COMPLETED. CUM ITER = 485
 *** TIME = .105718E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3784E-04 OSCILLATION LIMIT = 29.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.87 CRITERION= .3452
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4158E-01 CRITERION= .3436 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 15 COMPLETED. CUM ITER = 486
 *** TIME = .106507E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3651E-04 OSCILLATION LIMIT = 28.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .3449
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4105E-01 CRITERION= .3434 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 16 COMPLETED. CUM ITER = 487
 *** TIME = .107296E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3771E-04 OSCILLATION LIMIT = 29.75


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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.88 CRITERION= .3447
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4151E-01 CRITERION= .3431 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 17 COMPLETED. CUM ITER = 488
*** TIME = .108085E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3658E-04 OSCILLATION LIMIT = 28.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .3444
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4100E-01 CRITERION= .3429 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 18 COMPLETED. CUM ITER = 489
*** TIME = .108874E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3760E-04 OSCILLATION LIMIT = 29.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.89 CRITERION= .3442
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4144E-01 CRITERION= .3426 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 19 COMPLETED. CUM ITER = 490
*** TIME = .109663E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3663E-04 OSCILLATION LIMIT = 28.90
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .3439
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4094E-01 CRITERION= .3424 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 20 COMPLETED. CUM ITER = 491
*** TIME = .110452E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3751E-04 OSCILLATION LIMIT = 29.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.89 CRITERION= .3437
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4137E-01 CRITERION= .3421 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 21 COMPLETED. CUM ITER = 492
*** TIME = .111241E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3666E-04 OSCILLATION LIMIT = 28.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.18 CRITERION= .3434
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4090E-01 CRITERION= .3419 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 22 COMPLETED. CUM ITER = 493
*** TIME = .112030E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3743E-04 OSCILLATION LIMIT = 29.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.90 CRITERION= .3432
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4131E-01 CRITERION= .3415 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 23 COMPLETED. CUM ITER = 494
*** TIME = .112818E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3668E-04 OSCILLATION LIMIT = 28.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.18 CRITERION= .3429
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4084E-01 CRITERION= .3414 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 24 COMPLETED. CUM ITER = 495

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*** TIME = .113607E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3737E-04    OSCILLATION LIMIT = 29.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.91    CRITERION= .3427
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4124E-01    CRITERION= .3410    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 25 COMPLETED.    CUM ITER = 496
*** TIME = .114396E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3669E-04    OSCILLATION LIMIT = 28.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.19    CRITERION= .3424
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4080E-01    CRITERION= .3409    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 26 COMPLETED.    CUM ITER = 497
*** TIME = .115185E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3731E-04    OSCILLATION LIMIT = 29.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.91    CRITERION= .3422
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4119E-01    CRITERION= .3405    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 27 COMPLETED.    CUM ITER = 498
*** TIME = .115974E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3670E-04    OSCILLATION LIMIT = 28.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.20    CRITERION= .3419
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4074E-01    CRITERION= .3404    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 28 COMPLETED.    CUM ITER = 499
*** TIME = .116763E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3726E-04    OSCILLATION LIMIT = 29.40
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.92    CRITERION= .3417
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4113E-01    CRITERION= .3400    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 29 COMPLETED.    CUM ITER = 500
*** TIME = .117552E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3669E-04    OSCILLATION LIMIT = 28.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.20    CRITERION= .3413
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4068E-01    CRITERION= .3398    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 30 COMPLETED.    CUM ITER = 501
*** TIME = .118341E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3722E-04    OSCILLATION LIMIT = 29.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 29.93    CRITERION= .3412
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4107E-01    CRITERION= .3395    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 31 COMPLETED.    CUM ITER = 502
*** TIME = .119130E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3669E-04    OSCILLATION LIMIT = 28.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.21    CRITERION= .3408
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
    HT FLOW CONVERGENCE VALUE= .4064E-01    CRITERION= .3393    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 32 COMPLETED. CUM ITER = 503
*** TIME = .119919E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3718E-04 OSCILLATION LIMIT = 29.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.93 CRITERION= .3406
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4101E-01 CRITERION= .3390 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 33 COMPLETED. CUM ITER = 504
*** TIME = .120708E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3668E-04 OSCILLATION LIMIT = 28.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.22 CRITERION= .3403
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4057E-01 CRITERION= .3388 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 34 COMPLETED. CUM ITER = 505
*** TIME = .121497E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3714E-04 OSCILLATION LIMIT = 29.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.94 CRITERION= .3401
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4094E-01 CRITERION= .3385 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 35 COMPLETED. CUM ITER = 506
*** TIME = .122286E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3667E-04 OSCILLATION LIMIT = 28.93
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.22 CRITERION= .3398
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4051E-01 CRITERION= .3383 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 36 COMPLETED. CUM ITER = 507
*** TIME = .123075E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3711E-04 OSCILLATION LIMIT = 29.27
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.95 CRITERION= .3396
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4088E-01 CRITERION= .3380 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 37 COMPLETED. CUM ITER = 508
*** TIME = .123864E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3665E-04 OSCILLATION LIMIT = 28.92
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.23 CRITERION= .3393
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4047E-01 CRITERION= .3378 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 38 COMPLETED. CUM ITER = 509
*** TIME = .124653E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3707E-04 OSCILLATION LIMIT = 29.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 29.96 CRITERION= .3391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
HT FLOW CONVERGENCE VALUE= .4082E-01 CRITERION= .3375 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 16 SUBSTEP 39 COMPLETED. CUM ITER = 510
*** TIME = .125441E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3663E-04 OSCILLATION LIMIT = 28.90
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.24 CRITERION= .3388

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .7531E-01
 HT FLOW CONVERGENCE VALUE= .4040E-01 CRITERION= .3373 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 16 SUBSTEP 40 COMPLETED. CUM ITER = 511
 *** TIME = .126230E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3704E-04 OSCILLATION LIMIT = 29.22

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 04:34:59 JUN 18, 1995 CP= 27658.250
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 20.96 CRITERION= .3379
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2764E-01 CRITERION= .3370 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 1 COMPLETED. CUM ITER = 512
 *** TIME = .127019E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5391E-04 OSCILLATION LIMIT = 42.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.24 CRITERION= .3377
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2736E-01 CRITERION= .3369 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 2 COMPLETED. CUM ITER = 513
 *** TIME = .127808E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5330E-04 OSCILLATION LIMIT = 42.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.97 CRITERION= .3375
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2783E-01 CRITERION= .3366 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 3 COMPLETED. CUM ITER = 514
 *** TIME = .128597E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5030E-04 OSCILLATION LIMIT = 39.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.25 CRITERION= .3372
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2734E-01 CRITERION= .3364 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 4 COMPLETED. CUM ITER = 515
 *** TIME = .129386E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5324E-04 OSCILLATION LIMIT = 42.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.97 CRITERION= .3371
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2778E-01 CRITERION= .3361 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 5 COMPLETED. CUM ITER = 516
 *** TIME = .130175E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5055E-04 OSCILLATION LIMIT = 39.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.25 CRITERION= .3368
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2731E-01 CRITERION= .3360 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 6 COMPLETED. CUM ITER = 517
 *** TIME = .130964E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5299E-04 OSCILLATION LIMIT = 41.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.97 CRITERION= .3366
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2774E-01 CRITERION= .3357 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 7 COMPLETED. CUM ITER = 518
 *** TIME = .131753E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5074E-04 OSCILLATION LIMIT = 40.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.25 CRITERION= .3364
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2728E-01 CRITERION= .3356 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 8 COMPLETED. CUM ITER = 519
 *** TIME = .132542E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5278E-04 OSCILLATION LIMIT = 41.64
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.98 CRITERION= .3362
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2769E-01 CRITERION= .3353 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 9 COMPLETED. CUM ITER = 520
 *** TIME = .133331E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5089E-04 OSCILLATION LIMIT = 40.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.26 CRITERION= .3359
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2725E-01 CRITERION= .3351 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 10 COMPLETED. CUM ITER = 521
 *** TIME = .134120E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5262E-04 OSCILLATION LIMIT = 41.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.98 CRITERION= .3358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2765E-01 CRITERION= .3348 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 11 COMPLETED. CUM ITER = 522
 *** TIME = .134909E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5100E-04 OSCILLATION LIMIT = 40.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.26 CRITERION= .3355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2722E-01 CRITERION= .3347 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 12 COMPLETED. CUM ITER = 523
 *** TIME = .135698E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5250E-04 OSCILLATION LIMIT = 41.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.98 CRITERION= .3353
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2761E-01 CRITERION= .3344 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 13 COMPLETED. CUM ITER = 524
 *** TIME = .136487E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5108E-04 OSCILLATION LIMIT = 40.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.26 CRITERION= .3351
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2719E-01 CRITERION= .3343 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 14 COMPLETED. CUM ITER = 525
 *** TIME = .137276E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .5240E-04 OSCILLATION LIMIT = 41.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 20.99 CRITERION= .3349
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2757E-01 CRITERION= .3340 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 15 COMPLETED. CUM ITER = 526
 *** TIME = .138065E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5114E-04 OSCILLATION LIMIT = 40.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.27 CRITERION= .3346
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2716E-01 CRITERION= .3338 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 16 COMPLETED. CUM ITER = 527
 *** TIME = .138853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5231E-04 OSCILLATION LIMIT = 41.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.99 CRITERION= .3345
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2753E-01 CRITERION= .3335 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 17 COMPLETED. CUM ITER = 528
 *** TIME = .139642E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5118E-04 OSCILLATION LIMIT = 40.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.27 CRITERION= .3342
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2712E-01 CRITERION= .3334 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 18 COMPLETED. CUM ITER = 529
 *** TIME = .140431E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5224E-04 OSCILLATION LIMIT = 41.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 20.99 CRITERION= .3340
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2749E-01 CRITERION= .3331 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 19 COMPLETED. CUM ITER = 530
 *** TIME = .141220E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5121E-04 OSCILLATION LIMIT = 40.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.27 CRITERION= .3338
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2709E-01 CRITERION= .3329 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 20 COMPLETED. CUM ITER = 531
 *** TIME = .142009E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5219E-04 OSCILLATION LIMIT = 41.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .3336
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2746E-01 CRITERION= .3327 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 21 COMPLETED. CUM ITER = 532
 *** TIME = .142798E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5123E-04 OSCILLATION LIMIT = 40.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.28 CRITERION= .3333
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2707E-01 CRITERION= .3325 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 17 SUBSTEP 22 COMPLETED. CUM ITER = 533
*** TIME = .143587E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5214E-04 OSCILLATION LIMIT = 41.13
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .3332
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2742E-01 CRITERION= .3322 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 23 COMPLETED. CUM ITER = 534
*** TIME = .144376E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5124E-04 OSCILLATION LIMIT = 40.42
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.28 CRITERION= .3329
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2703E-01 CRITERION= .3321 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 24 COMPLETED. CUM ITER = 535
*** TIME = .145165E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5209E-04 OSCILLATION LIMIT = 41.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.00 CRITERION= .3327
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2738E-01 CRITERION= .3318 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 25 COMPLETED. CUM ITER = 536
*** TIME = .145954E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5124E-04 OSCILLATION LIMIT = 40.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.28 CRITERION= .3325
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2700E-01 CRITERION= .3316 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 26 COMPLETED. CUM ITER = 537
*** TIME = .146743E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5206E-04 OSCILLATION LIMIT = 41.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .3323
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2735E-01 CRITERION= .3314 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 27 COMPLETED. CUM ITER = 538
*** TIME = .147532E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5125E-04 OSCILLATION LIMIT = 40.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.29 CRITERION= .3320
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2697E-01 CRITERION= .3312 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 28 COMPLETED. CUM ITER = 539
*** TIME = .148321E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5202E-04 OSCILLATION LIMIT = 41.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .3319
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
HT FLOW CONVERGENCE VALUE= .2731E-01 CRITERION= .3309 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 17 SUBSTEP 29 COMPLETED. CUM ITER = 540
*** TIME = .149110E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .5124E-04 OSCILLATION LIMIT = 40.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.29 CRITERION= .3316
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01

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HT FLOW CONVERGENCE VALUE= .2694E-01 CRITERION= .3308 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 30 COMPLETED. CUM ITER = 541
 *** TIME = .149899E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5199E-04 OSCILLATION LIMIT = 41.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.01 CRITERION= .3314
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2728E-01 CRITERION= .3305 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 31 COMPLETED. CUM ITER = 542
 *** TIME = .150688E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5124E-04 OSCILLATION LIMIT = 40.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.29 CRITERION= .3312
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2691E-01 CRITERION= .3303 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 32 COMPLETED. CUM ITER = 543
 *** TIME = .151477E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5196E-04 OSCILLATION LIMIT = 40.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.02 CRITERION= .3310
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2724E-01 CRITERION= .3301 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 33 COMPLETED. CUM ITER = 544
 *** TIME = .152265E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5123E-04 OSCILLATION LIMIT = 40.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.30 CRITERION= .3307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2687E-01 CRITERION= .3299 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 34 COMPLETED. CUM ITER = 545
 *** TIME = .153054E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5193E-04 OSCILLATION LIMIT = 40.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.02 CRITERION= .3306
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2720E-01 CRITERION= .3296 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 35 COMPLETED. CUM ITER = 546
 *** TIME = .153843E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5123E-04 OSCILLATION LIMIT = 40.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.30 CRITERION= .3303
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2684E-01 CRITERION= .3295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 36 COMPLETED. CUM ITER = 547
 *** TIME = .154632E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5191E-04 OSCILLATION LIMIT = 40.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.02 CRITERION= .3301
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2717E-01 CRITERION= .3292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 37 COMPLETED. CUM ITER = 548
 *** TIME = .155421E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5122E-04 OSCILLATION LIMIT = 40.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.30 CRITERION= .3299
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2680E-01 CRITERION= .3290 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 38 COMPLETED. CUM ITER = 549
 *** TIME = .156210E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5188E-04 OSCILLATION LIMIT = 40.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.03 CRITERION= .3297
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2713E-01 CRITERION= .3288 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 39 COMPLETED. CUM ITER = 550
 *** TIME = .156999E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5121E-04 OSCILLATION LIMIT = 40.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 21.31 CRITERION= .3294
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5288E-01
 HT FLOW CONVERGENCE VALUE= .2676E-01 CRITERION= .3286 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 17 SUBSTEP 40 COMPLETED. CUM ITER = 551
 *** TIME = .157788E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .5186E-04 OSCILLATION LIMIT = 40.91

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:12:25 JUN 18, 1995 CP= 29866.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3290
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4207E-01
 HT FLOW CONVERGENCE VALUE= .1980E-01 CRITERION= .3283 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 1 COMPLETED. CUM ITER = 552
 *** TIME = .158577E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7249E-04 OSCILLATION LIMIT = 57.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.66 CRITERION= .3287
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4149E-01
 HT FLOW CONVERGENCE VALUE= .1949E-01 CRITERION= .3282 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 2 COMPLETED. CUM ITER = 553
 *** TIME = .159366E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7329E-04 OSCILLATION LIMIT = 57.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3285
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3934E-01
 HT FLOW CONVERGENCE VALUE= .1971E-01 CRITERION= .3279 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 3 COMPLETED. CUM ITER = 554
 *** TIME = .160155E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7122E-04 OSCILLATION LIMIT = 56.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.66 CRITERION= .3282
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4146E-01
 HT FLOW CONVERGENCE VALUE= .1946E-01 CRITERION= .3277 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 4 COMPLETED. CUM ITER = 555
 *** TIME = .160944E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7322E-04 OSCILLATION LIMIT = 57.77

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3281
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3962E-01
 HT FLOW CONVERGENCE VALUE= .1969E-01 CRITERION= .3274 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 5 COMPLETED. CUM ITER = 556
 *** TIME = .161733E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7135E-04 OSCILLATION LIMIT = 56.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.67 CRITERION= .3278
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4120E-01
 HT FLOW CONVERGENCE VALUE= .1943E-01 CRITERION= .3273 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 6 COMPLETED. CUM ITER = 557
 *** TIME = .162522E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7311E-04 OSCILLATION LIMIT = 57.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3985E-01
 HT FLOW CONVERGENCE VALUE= .1967E-01 CRITERION= .3270 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 7 COMPLETED. CUM ITER = 558
 *** TIME = .163311E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7145E-04 OSCILLATION LIMIT = 56.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.67 CRITERION= .3273
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4100E-01
 HT FLOW CONVERGENCE VALUE= .1939E-01 CRITERION= .3268 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 8 COMPLETED. CUM ITER = 559
 *** TIME = .164100E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7303E-04 OSCILLATION LIMIT = 57.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3272
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4003E-01
 HT FLOW CONVERGENCE VALUE= .1964E-01 CRITERION= .3265 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 9 COMPLETED. CUM ITER = 560
 *** TIME = .164888E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7153E-04 OSCILLATION LIMIT = 56.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.67 CRITERION= .3269
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4086E-01
 HT FLOW CONVERGENCE VALUE= .1936E-01 CRITERION= .3264 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 10 COMPLETED. CUM ITER = 561
 *** TIME = .165677E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7296E-04 OSCILLATION LIMIT = 57.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.39 CRITERION= .3267
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4016E-01
 HT FLOW CONVERGENCE VALUE= .1962E-01 CRITERION= .3261 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 11 COMPLETED. CUM ITER = 562
 *** TIME = .166466E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7158E-04 OSCILLATION LIMIT = 56.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.67 CRITERION= .3265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4074E-01
 HT FLOW CONVERGENCE VALUE= .1933E-01 CRITERION= .3259 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 12 COMPLETED. CUM ITER = 563

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*** TIME = .167255E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7291E-04    OSCILLATION LIMIT = 57.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.40    CRITERION= .3263
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4025E-01
    HT FLOW CONVERGENCE VALUE= .1960E-01    CRITERION= .3257    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 13 COMPLETED. CUM ITER = 564
*** TIME = .168044E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7163E-04    OSCILLATION LIMIT = 56.51
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.67    CRITERION= .3260
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4066E-01
    HT FLOW CONVERGENCE VALUE= .1930E-01    CRITERION= .3255    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 14 COMPLETED. CUM ITER = 565
*** TIME = .168833E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7286E-04    OSCILLATION LIMIT = 57.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.40    CRITERION= .3259
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4032E-01
    HT FLOW CONVERGENCE VALUE= .1957E-01    CRITERION= .3252    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 15 COMPLETED. CUM ITER = 566
*** TIME = .169622E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7166E-04    OSCILLATION LIMIT = 56.53
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.67    CRITERION= .3256
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4060E-01
    HT FLOW CONVERGENCE VALUE= .1927E-01    CRITERION= .3251    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 16 COMPLETED. CUM ITER = 567
*** TIME = .170411E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7283E-04    OSCILLATION LIMIT = 57.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.40    CRITERION= .3254
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4038E-01
    HT FLOW CONVERGENCE VALUE= .1954E-01    CRITERION= .3248    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 17 COMPLETED. CUM ITER = 568
*** TIME = .171200E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7168E-04    OSCILLATION LIMIT = 56.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.68    CRITERION= .3251
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4056E-01
    HT FLOW CONVERGENCE VALUE= .1924E-01    CRITERION= .3246    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 18 COMPLETED. CUM ITER = 569
*** TIME = .171989E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7279E-04    OSCILLATION LIMIT = 57.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.40    CRITERION= .3250
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4042E-01
    HT FLOW CONVERGENCE VALUE= .1952E-01    CRITERION= .3243    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 19 COMPLETED. CUM ITER = 570
*** TIME = .172778E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7170E-04    OSCILLATION LIMIT = 56.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 15.68    CRITERION= .3247
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4053E-01
    HT FLOW CONVERGENCE VALUE= .1921E-01    CRITERION= .3242    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 20 COMPLETED. CUM ITER = 571
*** TIME = .173567E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7277E-04 OSCILLATION LIMIT = 57.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.40 CRITERION= .3245
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4045E-01
HT FLOW CONVERGENCE VALUE= .1949E-01 CRITERION= .3239 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 21 COMPLETED. CUM ITER = 572
*** TIME = .174356E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7171E-04 OSCILLATION LIMIT = 56.58
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.68 CRITERION= .3243
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4050E-01
HT FLOW CONVERGENCE VALUE= .1918E-01 CRITERION= .3237 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 22 COMPLETED. CUM ITER = 573
*** TIME = .175145E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7275E-04 OSCILLATION LIMIT = 57.39
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3241
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
HT FLOW CONVERGENCE VALUE= .1946E-01 CRITERION= .3234 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 23 COMPLETED. CUM ITER = 574
*** TIME = .175934E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7172E-04 OSCILLATION LIMIT = 56.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.68 CRITERION= .3238
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4049E-01
HT FLOW CONVERGENCE VALUE= .1916E-01 CRITERION= .3233 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 24 COMPLETED. CUM ITER = 575
*** TIME = .176723E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7273E-04 OSCILLATION LIMIT = 57.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3236
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4048E-01
HT FLOW CONVERGENCE VALUE= .1943E-01 CRITERION= .3230 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 25 COMPLETED. CUM ITER = 576
*** TIME = .177512E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7173E-04 OSCILLATION LIMIT = 56.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.68 CRITERION= .3234
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4048E-01
HT FLOW CONVERGENCE VALUE= .1913E-01 CRITERION= .3228 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 26 COMPLETED. CUM ITER = 577
*** TIME = .178300E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7271E-04 OSCILLATION LIMIT = 57.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3232
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4049E-01
HT FLOW CONVERGENCE VALUE= .1941E-01 CRITERION= .3226 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 18 SUBSTEP 27 COMPLETED. CUM ITER = 578
*** TIME = .179089E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3229

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1910E-01 CRITERION= .3224 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 28 COMPLETED. CUM ITER = 579
 *** TIME = .179878E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7269E-04 OSCILLATION LIMIT = 57.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3228
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4050E-01
 HT FLOW CONVERGENCE VALUE= .1938E-01 CRITERION= .3221 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 29 COMPLETED. CUM ITER = 580
 *** TIME = .180667E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3225
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1908E-01 CRITERION= .3220 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 30 COMPLETED. CUM ITER = 581
 *** TIME = .181456E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7268E-04 OSCILLATION LIMIT = 57.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3223
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4050E-01
 HT FLOW CONVERGENCE VALUE= .1935E-01 CRITERION= .3217 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 31 COMPLETED. CUM ITER = 582
 *** TIME = .182245E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3220
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1905E-01 CRITERION= .3215 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 32 COMPLETED. CUM ITER = 583
 *** TIME = .183034E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7266E-04 OSCILLATION LIMIT = 57.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.41 CRITERION= .3219
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4051E-01
 HT FLOW CONVERGENCE VALUE= .1933E-01 CRITERION= .3212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 33 COMPLETED. CUM ITER = 584
 *** TIME = .183823E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3216
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4046E-01
 HT FLOW CONVERGENCE VALUE= .1902E-01 CRITERION= .3211 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 34 COMPLETED. CUM ITER = 585
 *** TIME = .184612E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7265E-04 OSCILLATION LIMIT = 57.32
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.42 CRITERION= .3214
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4051E-01
 HT FLOW CONVERGENCE VALUE= .1930E-01 CRITERION= .3208 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 35 COMPLETED. CUM ITER = 586
 *** TIME = .185401E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3212
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1900E-01 CRITERION= .3206 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 36 COMPLETED. CUM ITER = 587
 *** TIME = .186190E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7264E-04 OSCILLATION LIMIT = 57.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.42 CRITERION= .3210
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4051E-01
 HT FLOW CONVERGENCE VALUE= .1927E-01 CRITERION= .3203 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 37 COMPLETED. CUM ITER = 588
 *** TIME = .186979E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.69 CRITERION= .3207
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1897E-01 CRITERION= .3202 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 38 COMPLETED. CUM ITER = 589
 *** TIME = .187768E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7263E-04 OSCILLATION LIMIT = 57.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.42 CRITERION= .3206
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4051E-01
 HT FLOW CONVERGENCE VALUE= .1924E-01 CRITERION= .3199 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 39 COMPLETED. CUM ITER = 590
 *** TIME = .188557E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7174E-04 OSCILLATION LIMIT = 56.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 15.70 CRITERION= .3203
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4047E-01
 HT FLOW CONVERGENCE VALUE= .1894E-01 CRITERION= .3197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 18 SUBSTEP 40 COMPLETED. CUM ITER = 591
 *** TIME = .189346E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7262E-04 OSCILLATION LIMIT = 57.29

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 05:49:50 JUN 18, 1995 CP= 32074.840
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 11.47 CRITERION= .3199
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3934E-01
 HT FLOW CONVERGENCE VALUE= .1487E-01 CRITERION= .3195 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 1 COMPLETED. CUM ITER = 592
 *** TIME = .190135E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7521E-04 OSCILLATION LIMIT = 59.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3197
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
 HT FLOW CONVERGENCE VALUE= .1455E-01 CRITERION= .3194 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 2 COMPLETED. CUM ITER = 593
 *** TIME = .190924E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .7614E-04 OSCILLATION LIMIT = 60.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 11.47 CRITERION= .3196
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3854E-01
 HT FLOW CONVERGENCE VALUE= .1478E-01 CRITERION= .3191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 3 COMPLETED. CUM ITER = 594
 *** TIME = .191712E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7500E-04 OSCILLATION LIMIT = 59.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3881E-01
 HT FLOW CONVERGENCE VALUE= .1454E-01 CRITERION= .3190 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 4 COMPLETED. CUM ITER = 595
 *** TIME = .192501E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7613E-04 OSCILLATION LIMIT = 60.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.47 CRITERION= .3192
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3858E-01
 HT FLOW CONVERGENCE VALUE= .1476E-01 CRITERION= .3187 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 5 COMPLETED. CUM ITER = 596
 *** TIME = .193290E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7501E-04 OSCILLATION LIMIT = 59.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3189
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3877E-01
 HT FLOW CONVERGENCE VALUE= .1451E-01 CRITERION= .3186 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 6 COMPLETED. CUM ITER = 597
 *** TIME = .194079E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7612E-04 OSCILLATION LIMIT = 60.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3188
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3862E-01
 HT FLOW CONVERGENCE VALUE= .1475E-01 CRITERION= .3183 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 7 COMPLETED. CUM ITER = 598
 *** TIME = .194868E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7501E-04 OSCILLATION LIMIT = 59.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3185
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3874E-01
 HT FLOW CONVERGENCE VALUE= .1449E-01 CRITERION= .3182 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 8 COMPLETED. CUM ITER = 599
 *** TIME = .195657E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7612E-04 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3184
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3865E-01
 HT FLOW CONVERGENCE VALUE= .1473E-01 CRITERION= .3180 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 9 COMPLETED. CUM ITER = 600
 *** TIME = .196446E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7501E-04 OSCILLATION LIMIT = 59.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3182
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1447E-01 CRITERION= .3178 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 10 COMPLETED. CUM ITER = 601
 *** TIME = .197235E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7611E-04 OSCILLATION LIMIT = 60.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3180
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3867E-01
 HT FLOW CONVERGENCE VALUE= .1471E-01 CRITERION= .3176 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 11 COMPLETED. CUM ITER = 602
 *** TIME = .198024E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7502E-04 OSCILLATION LIMIT = 59.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3178
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1445E-01 CRITERION= .3175 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 12 COMPLETED. CUM ITER = 603
 *** TIME = .198813E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7610E-04 OSCILLATION LIMIT = 60.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3177
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3868E-01
 HT FLOW CONVERGENCE VALUE= .1470E-01 CRITERION= .3172 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 13 COMPLETED. CUM ITER = 604
 *** TIME = .199602E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7502E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .3171 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 14 COMPLETED. CUM ITER = 605
 *** TIME = .200391E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7609E-04 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3173
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3869E-01
 HT FLOW CONVERGENCE VALUE= .1468E-01 CRITERION= .3168 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 15 COMPLETED. CUM ITER = 606
 *** TIME = .201180E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7502E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1442E-01 CRITERION= .3167 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 16 COMPLETED. CUM ITER = 607
 *** TIME = .201969E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7608E-04 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3169
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1466E-01 CRITERION= .3164 <<< CONVERGED

>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 19 SUBSTEP 17 COMPLETED. CUM ITER = 608
 *** TIME = .202758E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7502E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.75 CRITERION= .3166
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3869E-01

HT FLOW CONVERGENCE VALUE= .1440E-01 CRITERION= .3163 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 18 COMPLETED. CUM ITER = 609
 *** TIME = .203547E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7608E-04 OSCILLATION LIMIT = 60.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3165
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1464E-01 CRITERION= .3160 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 19 COMPLETED. CUM ITER = 610
 *** TIME = .204335E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7502E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3163
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3869E-01
 HT FLOW CONVERGENCE VALUE= .1438E-01 CRITERION= .3159 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 20 COMPLETED. CUM ITER = 611
 *** TIME = .205124E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7607E-04 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3161
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1463E-01 CRITERION= .3157 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 21 COMPLETED. CUM ITER = 612
 *** TIME = .205913E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3159
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1436E-01 CRITERION= .3155 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 22 COMPLETED. CUM ITER = 613
 *** TIME = .206702E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7606E-04 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3157
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1461E-01 CRITERION= .3153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 23 COMPLETED. CUM ITER = 614
 *** TIME = .207491E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1434E-01 CRITERION= .3152 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 24 COMPLETED. CUM ITER = 615
 *** TIME = .208280E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-04 OSCILLATION LIMIT = 60.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.48 CRITERION= .3154
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1459E-01 CRITERION= .3149 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 25 COMPLETED. CUM ITER = 616
 *** TIME = .209069E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3151
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3870E-01
 HT FLOW CONVERGENCE VALUE= .1433E-01 CRITERION= .3148 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 26 COMPLETED. CUM ITER = 617
 *** TIME = .209858E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-04 OSCILLATION LIMIT = 60.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1457E-01 CRITERION= .3145 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 27 COMPLETED. CUM ITER = 618
 *** TIME = .210647E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3147
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1431E-01 CRITERION= .3144 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 28 COMPLETED. CUM ITER = 619
 *** TIME = .211436E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7604E-04 OSCILLATION LIMIT = 59.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3146
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1455E-01 CRITERION= .3141 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 29 COMPLETED. CUM ITER = 620
 *** TIME = .212225E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3143
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1429E-01 CRITERION= .3140 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 30 COMPLETED. CUM ITER = 621
 *** TIME = .213014E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7603E-04 OSCILLATION LIMIT = 59.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3142
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
 HT FLOW CONVERGENCE VALUE= .1453E-01 CRITERION= .3138 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 31 COMPLETED. CUM ITER = 622
 *** TIME = .213803E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.20
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3871E-01
 HT FLOW CONVERGENCE VALUE= .1427E-01 CRITERION= .3136 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 32 COMPLETED. CUM ITER = 623
 *** TIME = .214592E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7603E-04 OSCILLATION LIMIT = 59.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3138
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
 HT FLOW CONVERGENCE VALUE= .1451E-01 CRITERION= .3134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 19 SUBSTEP 33 COMPLETED. CUM ITER = 624
 *** TIME = .215381E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.20

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3136
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
HT FLOW CONVERGENCE VALUE= .1425E-01 CRITERION= .3133 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 34 COMPLETED. CUM ITER = 625
*** TIME = .216170E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7602E-04 OSCILLATION LIMIT = 59.98
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3135
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
HT FLOW CONVERGENCE VALUE= .1450E-01 CRITERION= .3130 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 35 COMPLETED. CUM ITER = 626
*** TIME = .216959E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3132
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3872E-01
HT FLOW CONVERGENCE VALUE= .1424E-01 CRITERION= .3129 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 36 COMPLETED. CUM ITER = 627
*** TIME = .217747E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7602E-04 OSCILLATION LIMIT = 59.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3131
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
HT FLOW CONVERGENCE VALUE= .1448E-01 CRITERION= .3126 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 37 COMPLETED. CUM ITER = 628
*** TIME = .218536E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.76 CRITERION= .3128
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
HT FLOW CONVERGENCE VALUE= .1422E-01 CRITERION= .3125 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 38 COMPLETED. CUM ITER = 629
*** TIME = .219325E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7601E-04 OSCILLATION LIMIT = 59.97
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.49 CRITERION= .3127
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
HT FLOW CONVERGENCE VALUE= .1446E-01 CRITERION= .3122 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 39 COMPLETED. CUM ITER = 630
*** TIME = .220114E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7503E-04 OSCILLATION LIMIT = 59.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 11.77 CRITERION= .3124
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3873E-01
HT FLOW CONVERGENCE VALUE= .1420E-01 CRITERION= .3121 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 19 SUBSTEP 40 COMPLETED. CUM ITER = 631
*** TIME = .220903E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7600E-04 OSCILLATION LIMIT = 59.96
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***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 06:27:15 JUN 18, 1995 CP= 34283.450
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 9.696 CRITERION= .3122
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3826E-01
 HT FLOW CONVERGENCE VALUE= .1270E-01 CRITERION= .3119 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 1 COMPLETED. CUM ITER = 632
 *** TIME = .221692E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7505E-04 OSCILLATION LIMIT = 59.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.969 CRITERION= .3120
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
 HT FLOW CONVERGENCE VALUE= .1243E-01 CRITERION= .3117 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 2 COMPLETED. CUM ITER = 633
 *** TIME = .222481E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7612E-04 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.697 CRITERION= .3119
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3791E-01
 HT FLOW CONVERGENCE VALUE= .1264E-01 CRITERION= .3115 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 3 COMPLETED. CUM ITER = 634
 *** TIME = .223270E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7509E-04 OSCILLATION LIMIT = 59.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.970 CRITERION= .3117
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3806E-01
 HT FLOW CONVERGENCE VALUE= .1242E-01 CRITERION= .3114 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 4 COMPLETED. CUM ITER = 635
 *** TIME = .224059E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7611E-04 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.697 CRITERION= .3115
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3793E-01
 HT FLOW CONVERGENCE VALUE= .1263E-01 CRITERION= .3111 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 5 COMPLETED. CUM ITER = 636
 *** TIME = .224848E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7509E-04 OSCILLATION LIMIT = 59.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.971 CRITERION= .3113
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3804E-01
 HT FLOW CONVERGENCE VALUE= .1240E-01 CRITERION= .3110 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 6 COMPLETED. CUM ITER = 637
 *** TIME = .225637E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7611E-04 OSCILLATION LIMIT = 60.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.698 CRITERION= .3112
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3794E-01
 HT FLOW CONVERGENCE VALUE= .1261E-01 CRITERION= .3108 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 7 COMPLETED. CUM ITER = 638
 *** TIME = .226426E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.972 CRITERION= .3109
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
 HT FLOW CONVERGENCE VALUE= .1239E-01 CRITERION= .3107 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 8 COMPLETED. CUM ITER = 639
*** TIME = .227215E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7611E-04 OSCILLATION LIMIT = 60.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.699 CRITERION= .3108
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3796E-01
HT FLOW CONVERGENCE VALUE= .1260E-01 CRITERION= .3104 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 9 COMPLETED. CUM ITER = 640
*** TIME = .228004E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.24
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.972 CRITERION= .3106
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
HT FLOW CONVERGENCE VALUE= .1237E-01 CRITERION= .3103 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 10 COMPLETED. CUM ITER = 641
*** TIME = .228793E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7611E-04 OSCILLATION LIMIT = 60.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.700 CRITERION= .3105
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3797E-01
HT FLOW CONVERGENCE VALUE= .1258E-01 CRITERION= .3101 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 11 COMPLETED. CUM ITER = 642
*** TIME = .229582E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.973 CRITERION= .3102
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
HT FLOW CONVERGENCE VALUE= .1236E-01 CRITERION= .3100 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 12 COMPLETED. CUM ITER = 643
*** TIME = .230371E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7610E-04 OSCILLATION LIMIT = 60.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.700 CRITERION= .3101
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3798E-01
HT FLOW CONVERGENCE VALUE= .1257E-01 CRITERION= .3097 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 13 COMPLETED. CUM ITER = 644
*** TIME = .231159E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.974 CRITERION= .3099
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
HT FLOW CONVERGENCE VALUE= .1234E-01 CRITERION= .3096 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 14 COMPLETED. CUM ITER = 645
*** TIME = .231948E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7610E-04 OSCILLATION LIMIT = 60.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.701 CRITERION= .3098
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3799E-01
HT FLOW CONVERGENCE VALUE= .1256E-01 CRITERION= .3094 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 20 SUBSTEP 15 COMPLETED. CUM ITER = 646
*** TIME = .232737E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.974 CRITERION= .3095

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1233E-01 CRITERION= .3093 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 16 COMPLETED. CUM ITER = 647
 *** TIME = .233526E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7610E-04 OSCILLATION LIMIT = 60.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.702 CRITERION= .3094
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3799E-01
 HT FLOW CONVERGENCE VALUE= .1254E-01 CRITERION= .3090 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 17 COMPLETED. CUM ITER = 648
 *** TIME = .234315E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.975 CRITERION= .3092
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1231E-01 CRITERION= .3089 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 18 COMPLETED. CUM ITER = 649
 *** TIME = .235104E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7609E-04 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.703 CRITERION= .3091
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3800E-01
 HT FLOW CONVERGENCE VALUE= .1253E-01 CRITERION= .3087 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 19 COMPLETED. CUM ITER = 650
 *** TIME = .235893E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.976 CRITERION= .3088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1230E-01 CRITERION= .3086 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 20 COMPLETED. CUM ITER = 651
 *** TIME = .236682E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7609E-04 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.703 CRITERION= .3087
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3800E-01
 HT FLOW CONVERGENCE VALUE= .1251E-01 CRITERION= .3083 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 21 COMPLETED. CUM ITER = 652
 *** TIME = .237471E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.976 CRITERION= .3085
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1228E-01 CRITERION= .3082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 22 COMPLETED. CUM ITER = 653
 *** TIME = .238260E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7608E-04 OSCILLATION LIMIT = 60.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.704 CRITERION= .3083
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3800E-01
 HT FLOW CONVERGENCE VALUE= .1250E-01 CRITERION= .3080 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 23 COMPLETED. CUM ITER = 654
 *** TIME = .239049E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.977 CRITERION= .3081
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
 HT FLOW CONVERGENCE VALUE= .1227E-01 CRITERION= .3078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 24 COMPLETED. CUM ITER = 655
 *** TIME = .239838E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7608E-04 OSCILLATION LIMIT = 60.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.705 CRITERION= .3080
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3800E-01
 HT FLOW CONVERGENCE VALUE= .1248E-01 CRITERION= .3076 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 25 COMPLETED. CUM ITER = 656
 *** TIME = .240627E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.978 CRITERION= .3077
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
 HT FLOW CONVERGENCE VALUE= .1225E-01 CRITERION= .3075 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 26 COMPLETED. CUM ITER = 657
 *** TIME = .241416E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7608E-04 OSCILLATION LIMIT = 60.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.706 CRITERION= .3076
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3801E-01
 HT FLOW CONVERGENCE VALUE= .1247E-01 CRITERION= .3072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 27 COMPLETED. CUM ITER = 658
 *** TIME = .242205E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.978 CRITERION= .3074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3803E-01
 HT FLOW CONVERGENCE VALUE= .1224E-01 CRITERION= .3071 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 28 COMPLETED. CUM ITER = 659
 *** TIME = .242994E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7607E-04 OSCILLATION LIMIT = 60.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.706 CRITERION= .3073
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3801E-01
 HT FLOW CONVERGENCE VALUE= .1245E-01 CRITERION= .3069 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 29 COMPLETED. CUM ITER = 660
 *** TIME = .243782E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.979 CRITERION= .3070
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3804E-01
 HT FLOW CONVERGENCE VALUE= .1222E-01 CRITERION= .3068 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 30 COMPLETED. CUM ITER = 661
 *** TIME = .244571E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7607E-04 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.707 CRITERION= .3069
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3801E-01
 HT FLOW CONVERGENCE VALUE= .1244E-01 CRITERION= .3065 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 31 COMPLETED. CUM ITER = 662
 *** TIME = .245360E+09 TIME INC = 788940.

*** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED
 HT FLOW CONVERGENCE VALUE= 9.980 CRITERION= .3067
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3804E-01
 HT FLOW CONVERGENCE VALUE= .1221E-01 CRITERION= .3064 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 32 COMPLETED. CUM ITER = 663
 *** TIME = .246149E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7606E-04 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.708 CRITERION= .3066
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3801E-01
 HT FLOW CONVERGENCE VALUE= .1242E-01 CRITERION= .3062 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 33 COMPLETED. CUM ITER = 664
 *** TIME = .246938E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.981 CRITERION= .3063
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3805E-01
 HT FLOW CONVERGENCE VALUE= .1220E-01 CRITERION= .3061 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 34 COMPLETED. CUM ITER = 665
 *** TIME = .247727E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7606E-04 OSCILLATION LIMIT = 60.01
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.709 CRITERION= .3062
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3801E-01
 HT FLOW CONVERGENCE VALUE= .1241E-01 CRITERION= .3058 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 35 COMPLETED. CUM ITER = 666
 *** TIME = .248516E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.981 CRITERION= .3060
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3805E-01
 HT FLOW CONVERGENCE VALUE= .1218E-01 CRITERION= .3057 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 36 COMPLETED. CUM ITER = 667
 *** TIME = .249305E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-04 OSCILLATION LIMIT = 60.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.709 CRITERION= .3059
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1239E-01 CRITERION= .3055 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 37 COMPLETED. CUM ITER = 668
 *** TIME = .250094E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.982 CRITERION= .3056
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3805E-01
 HT FLOW CONVERGENCE VALUE= .1217E-01 CRITERION= .3054 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 38 COMPLETED. CUM ITER = 669
 *** TIME = .250883E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-04 OSCILLATION LIMIT = 60.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.710 CRITERION= .3055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3802E-01
 HT FLOW CONVERGENCE VALUE= .1238E-01 CRITERION= .3051 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 20 SUBSTEP 39 COMPLETED. CUM ITER = 670
 *** TIME = .251672E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7508E-04 OSCILLATION LIMIT = 59.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 9.983 CRITERION= .3053
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3806E-01
 HT FLOW CONVERGENCE VALUE= .1215E-01 CRITERION= .3050 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 20 SUBSTEP 40 COMPLETED. CUM ITER = 671
 *** TIME = .252461E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .7605E-04 OSCILLATION LIMIT = 60.00

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 07:04:39 JUN 18, 1995 CP= 36491.580
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3050
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5322E-01
 HT FLOW CONVERGENCE VALUE= .1299E-01 CRITERION= .3048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 1 COMPLETED. CUM ITER = 672
 *** TIME = .253250E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3912E-04 OSCILLATION LIMIT = 30.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3048
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5268E-01
 HT FLOW CONVERGENCE VALUE= .1289E-01 CRITERION= .3047 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 2 COMPLETED. CUM ITER = 673
 *** TIME = .254039E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3971E-04 OSCILLATION LIMIT = 31.33
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3047
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4998E-01
 HT FLOW CONVERGENCE VALUE= .1214E-01 CRITERION= .3044 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 3 COMPLETED. CUM ITER = 674
 *** TIME = .254828E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3964E-04 OSCILLATION LIMIT = 31.28
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3044
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5263E-01
 HT FLOW CONVERGENCE VALUE= .1283E-01 CRITERION= .3043 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 4 COMPLETED. CUM ITER = 675
 *** TIME = .255617E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3975E-04 OSCILLATION LIMIT = 31.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3043
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5034E-01
 HT FLOW CONVERGENCE VALUE= .1221E-01 CRITERION= .3041 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 5 COMPLETED. CUM ITER = 676
 *** TIME = .256406E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3960E-04 OSCILLATION LIMIT = 31.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5234E-01

HT FLOW CONVERGENCE VALUE= .1274E-01 CRITERION= .3040 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 6 COMPLETED. CUM ITER = 677
 *** TIME = .257194E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3979E-04 OSCILLATION LIMIT = 31.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3040
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5062E-01
 HT FLOW CONVERGENCE VALUE= .1225E-01 CRITERION= .3038 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 7 COMPLETED. CUM ITER = 678
 *** TIME = .257983E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3956E-04 OSCILLATION LIMIT = 31.21
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5211E-01
 HT FLOW CONVERGENCE VALUE= .1268E-01 CRITERION= .3037 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 8 COMPLETED. CUM ITER = 679
 *** TIME = .258772E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3981E-04 OSCILLATION LIMIT = 31.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5084E-01
 HT FLOW CONVERGENCE VALUE= .1229E-01 CRITERION= .3034 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 9 COMPLETED. CUM ITER = 680
 *** TIME = .259561E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3953E-04 OSCILLATION LIMIT = 31.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3034
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5194E-01
 HT FLOW CONVERGENCE VALUE= .1262E-01 CRITERION= .3033 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 10 COMPLETED. CUM ITER = 681
 *** TIME = .260350E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3983E-04 OSCILLATION LIMIT = 31.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5101E-01
 HT FLOW CONVERGENCE VALUE= .1231E-01 CRITERION= .3031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 11 COMPLETED. CUM ITER = 682
 *** TIME = .261139E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3951E-04 OSCILLATION LIMIT = 31.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5181E-01
 HT FLOW CONVERGENCE VALUE= .1258E-01 CRITERION= .3030 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 12 COMPLETED. CUM ITER = 683
 *** TIME = .261928E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3985E-04 OSCILLATION LIMIT = 31.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5114E-01
 HT FLOW CONVERGENCE VALUE= .1232E-01 CRITERION= .3028 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 13 COMPLETED. CUM ITER = 684
 *** TIME = .262717E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3949E-04 OSCILLATION LIMIT = 31.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5172E-01
 HT FLOW CONVERGENCE VALUE= .1255E-01 CRITERION= .3027 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 14 COMPLETED. CUM ITER = 685
 *** TIME = .263506E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3986E-04 OSCILLATION LIMIT = 31.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3027
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5124E-01
 HT FLOW CONVERGENCE VALUE= .1233E-01 CRITERION= .3025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 15 COMPLETED. CUM ITER = 686
 *** TIME = .264295E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3947E-04 OSCILLATION LIMIT = 31.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5166E-01
 HT FLOW CONVERGENCE VALUE= .1251E-01 CRITERION= .3024 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 16 COMPLETED. CUM ITER = 687
 *** TIME = .265084E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.45
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3024
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5132E-01
 HT FLOW CONVERGENCE VALUE= .1234E-01 CRITERION= .3021 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 17 COMPLETED. CUM ITER = 688
 *** TIME = .265873E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3946E-04 OSCILLATION LIMIT = 31.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3021
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5161E-01
 HT FLOW CONVERGENCE VALUE= .1249E-01 CRITERION= .3020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 18 COMPLETED. CUM ITER = 689
 *** TIME = .266662E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3020
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5138E-01
 HT FLOW CONVERGENCE VALUE= .1234E-01 CRITERION= .3018 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 19 COMPLETED. CUM ITER = 690
 *** TIME = .267451E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3945E-04 OSCILLATION LIMIT = 31.13
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3018
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158E-01
 HT FLOW CONVERGENCE VALUE= .1247E-01 CRITERION= .3017 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 20 COMPLETED. CUM ITER = 691
 *** TIME = .268240E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3017
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5142E-01
 HT FLOW CONVERGENCE VALUE= .1234E-01 CRITERION= .3015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 21 SUBSTEP 21 COMPLETED. CUM ITER = 692
 *** TIME = .269029E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3944E-04 OSCILLATION LIMIT = 31.12

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3015
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5156E-01
HT FLOW CONVERGENCE VALUE= .1245E-01 CRITERION= .3014 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 22 COMPLETED. CUM ITER = 693
*** TIME = .269818E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3014
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5146E-01
HT FLOW CONVERGENCE VALUE= .1233E-01 CRITERION= .3011 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 23 COMPLETED. CUM ITER = 694
*** TIME = .270606E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3944E-04 OSCILLATION LIMIT = 31.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3011
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5155E-01
HT FLOW CONVERGENCE VALUE= .1243E-01 CRITERION= .3010 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 24 COMPLETED. CUM ITER = 695
*** TIME = .271395E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3988E-04 OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3010
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5149E-01
HT FLOW CONVERGENCE VALUE= .1232E-01 CRITERION= .3008 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 25 COMPLETED. CUM ITER = 696
*** TIME = .272184E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3943E-04 OSCILLATION LIMIT = 31.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3008
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5154E-01
HT FLOW CONVERGENCE VALUE= .1241E-01 CRITERION= .3007 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 26 COMPLETED. CUM ITER = 697
*** TIME = .272973E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3007
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5151E-01
HT FLOW CONVERGENCE VALUE= .1232E-01 CRITERION= .3005 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 27 COMPLETED. CUM ITER = 698
*** TIME = .273762E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3942E-04 OSCILLATION LIMIT = 31.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .3005
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5154E-01
HT FLOW CONVERGENCE VALUE= .1239E-01 CRITERION= .3004 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 28 COMPLETED. CUM ITER = 699
*** TIME = .274551E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04 OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .3004
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5153E-01
HT FLOW CONVERGENCE VALUE= .1231E-01 CRITERION= .3002 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 29 COMPLETED. CUM ITER = 700

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*** TIME = .275340E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3942E-04    OSCILLATION LIMIT = 31.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.487    CRITERION= .3001
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5154E-01
    HT FLOW CONVERGENCE VALUE= .1238E-01    CRITERION= .3001    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 30 COMPLETED. CUM ITER = 701
*** TIME = .276129E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04    OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.223    CRITERION= .3000
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5155E-01
    HT FLOW CONVERGENCE VALUE= .1230E-01    CRITERION= .2998    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 31 COMPLETED. CUM ITER = 702
*** TIME = .276918E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3941E-04    OSCILLATION LIMIT = 31.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.487    CRITERION= .2998
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5155E-01
    HT FLOW CONVERGENCE VALUE= .1236E-01    CRITERION= .2997    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 32 COMPLETED. CUM ITER = 703
*** TIME = .277707E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04    OSCILLATION LIMIT = 31.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.223    CRITERION= .2997
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5156E-01
    HT FLOW CONVERGENCE VALUE= .1229E-01    CRITERION= .2995    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 33 COMPLETED. CUM ITER = 704
*** TIME = .278496E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3941E-04    OSCILLATION LIMIT = 31.09
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.487    CRITERION= .2995
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5155E-01
    HT FLOW CONVERGENCE VALUE= .1235E-01    CRITERION= .2994    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 34 COMPLETED. CUM ITER = 705
*** TIME = .279285E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04    OSCILLATION LIMIT = 31.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.223    CRITERION= .2994
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158E-01
    HT FLOW CONVERGENCE VALUE= .1228E-01    CRITERION= .2992    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 35 COMPLETED. CUM ITER = 706
*** TIME = .280074E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3940E-04    OSCILLATION LIMIT = 31.09
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.487    CRITERION= .2992
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5156E-01
    HT FLOW CONVERGENCE VALUE= .1234E-01    CRITERION= .2991    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 36 COMPLETED. CUM ITER = 707
*** TIME = .280863E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3987E-04    OSCILLATION LIMIT = 31.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 1.223    CRITERION= .2991
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5159E-01
    HT FLOW CONVERGENCE VALUE= .1227E-01    CRITERION= .2988    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 37 COMPLETED. CUM ITER = 708
*** TIME = .281652E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3940E-04 OSCILLATION LIMIT = 31.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .2988
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5157E-01
HT FLOW CONVERGENCE VALUE= .1232E-01 CRITERION= .2987 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 38 COMPLETED. CUM ITER = 709
*** TIME = .282441E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3986E-04 OSCILLATION LIMIT = 31.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.223 CRITERION= .2987
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5160E-01
HT FLOW CONVERGENCE VALUE= .1226E-01 CRITERION= .2985 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 39 COMPLETED. CUM ITER = 710
*** TIME = .283229E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3940E-04 OSCILLATION LIMIT = 31.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1.487 CRITERION= .2985
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5158E-01
HT FLOW CONVERGENCE VALUE= .1231E-01 CRITERION= .2984 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 21 SUBSTEP 40 COMPLETED. CUM ITER = 711
*** TIME = .284018E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3986E-04 OSCILLATION LIMIT = 31.45
    Apply loads and solve for 10 to 90 years

*DO LOOP ON PARAMETER= TM FROM .31558E+09 TO .28402E+10 BY .31558E+09
TIME= .31558E+09

SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
4874.89996 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 145.65 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 146.46 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP

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VALUES = 148.56 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 38700.870 TIME= 07:42:09
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 07:42:09 JUN 18, 1995 CP= 38700.870
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 22
TIME AT END OF THE LOAD STEP.31558E+09
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000
TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
CONVERGENCE CONTROLS.USE DEFAULTS
PRINT OUTPUT CONTROLSNO PRINTOUT
DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= .5766 CRITERION= .2984
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4385E-01
HT FLOW CONVERGENCE VALUE= .1071E-01 CRITERION= .2982 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 1 COMPLETED. CUM ITER = 712
*** TIME = .284807E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3702E-04 OSCILLATION LIMIT = 29.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8333 CRITERION= .2982
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4350E-01
HT FLOW CONVERGENCE VALUE= .1058E-01 CRITERION= .2981 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 2 COMPLETED. CUM ITER = 713
*** TIME = .285596E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3769E-04 OSCILLATION LIMIT = 29.74
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5766 CRITERION= .2981
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4440E-01
HT FLOW CONVERGENCE VALUE= .1069E-01 CRITERION= .2979 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 3 COMPLETED. CUM ITER = 714
*** TIME = .286385E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8333 CRITERION= .2979
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4359E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2979 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 4 COMPLETED. CUM ITER = 715
 *** TIME = .287174E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3768E-04 OSCILLATION LIMIT = 29.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5766 CRITERION= .2978
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4431E-01
 HT FLOW CONVERGENCE VALUE= .1067E-01 CRITERION= .2976 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 5 COMPLETED. CUM ITER = 716
 *** TIME = .287963E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8333 CRITERION= .2976
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4369E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2976 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 6 COMPLETED. CUM ITER = 717
 *** TIME = .288752E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3767E-04 OSCILLATION LIMIT = 29.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5767 CRITERION= .2976
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4424E-01
 HT FLOW CONVERGENCE VALUE= .1064E-01 CRITERION= .2974 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 7 COMPLETED. CUM ITER = 718
 *** TIME = .289541E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8333 CRITERION= .2974
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4377E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2973 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 8 COMPLETED. CUM ITER = 719
 *** TIME = .290330E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3766E-04 OSCILLATION LIMIT = 29.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5767 CRITERION= .2973
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4419E-01
 HT FLOW CONVERGENCE VALUE= .1062E-01 CRITERION= .2971 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 9 COMPLETED. CUM ITER = 720
 *** TIME = .291119E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8333 CRITERION= .2971
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4383E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2970 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 10 COMPLETED. CUM ITER = 721
 *** TIME = .291908E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3765E-04 OSCILLATION LIMIT = 29.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5767 CRITERION= .2970
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4415E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2968 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 11 COMPLETED. CUM ITER = 722
 *** TIME = .292697E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3710E-04 OSCILLATION LIMIT = 29.27

*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8332 CRITERION= .2968
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4388E-01
 HT FLOW CONVERGENCE VALUE= .1060E-01 CRITERION= .2968 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 12 COMPLETED. CUM ITER = 723
 *** TIME = .293486E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3764E-04 OSCILLATION LIMIT = 29.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5767 CRITERION= .2967
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4412E-01
 HT FLOW CONVERGENCE VALUE= .1058E-01 CRITERION= .2965 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 13 COMPLETED. CUM ITER = 724
 *** TIME = .294275E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8332 CRITERION= .2965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4392E-01
 HT FLOW CONVERGENCE VALUE= .1059E-01 CRITERION= .2965 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 14 COMPLETED. CUM ITER = 725
 *** TIME = .295064E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3764E-04 OSCILLATION LIMIT = 29.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5768 CRITERION= .2965
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4410E-01
 HT FLOW CONVERGENCE VALUE= .1057E-01 CRITERION= .2963 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 15 COMPLETED. CUM ITER = 726
 *** TIME = .295853E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8332 CRITERION= .2963
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4395E-01
 HT FLOW CONVERGENCE VALUE= .1059E-01 CRITERION= .2962 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 16 COMPLETED. CUM ITER = 727
 *** TIME = .296641E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3763E-04 OSCILLATION LIMIT = 29.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5768 CRITERION= .2962
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4409E-01
 HT FLOW CONVERGENCE VALUE= .1055E-01 CRITERION= .2960 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 17 COMPLETED. CUM ITER = 728
 *** TIME = .297430E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3709E-04 OSCILLATION LIMIT = 29.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8332 CRITERION= .2960
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4397E-01
 HT FLOW CONVERGENCE VALUE= .1058E-01 CRITERION= .2959 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 18 COMPLETED. CUM ITER = 729
 *** TIME = .298219E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3763E-04 OSCILLATION LIMIT = 29.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5768 CRITERION= .2959
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4408E-01
 HT FLOW CONVERGENCE VALUE= .1054E-01 CRITERION= .2957 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 19 COMPLETED. CUM ITER = 730

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*** TIME = .299008E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3709E-04    OSCILLATION LIMIT = 29.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .8332    CRITERION= .2957
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4400E-01
    HT FLOW CONVERGENCE VALUE= .1057E-01    CRITERION= .2957    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 20 COMPLETED.    CUM ITER = 731
*** TIME = .299797E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3763E-04    OSCILLATION LIMIT = 29.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .5768    CRITERION= .2956
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4408E-01
    HT FLOW CONVERGENCE VALUE= .1053E-01    CRITERION= .2954    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 21 COMPLETED.    CUM ITER = 732
*** TIME = .300586E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3709E-04    OSCILLATION LIMIT = 29.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .8331    CRITERION= .2954
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4402E-01
    HT FLOW CONVERGENCE VALUE= .1056E-01    CRITERION= .2954    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 22 COMPLETED.    CUM ITER = 733
*** TIME = .301375E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3762E-04    OSCILLATION LIMIT = 29.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .5769    CRITERION= .2954
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
    HT FLOW CONVERGENCE VALUE= .1052E-01    CRITERION= .2952    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 23 COMPLETED.    CUM ITER = 734
*** TIME = .302164E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3709E-04    OSCILLATION LIMIT = 29.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .8331    CRITERION= .2952
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4403E-01
    HT FLOW CONVERGENCE VALUE= .1055E-01    CRITERION= .2951    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 24 COMPLETED.    CUM ITER = 735
*** TIME = .302953E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3762E-04    OSCILLATION LIMIT = 29.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .5769    CRITERION= .2951
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
    HT FLOW CONVERGENCE VALUE= .1051E-01    CRITERION= .2949    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 25 COMPLETED.    CUM ITER = 736
*** TIME = .303742E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3708E-04    OSCILLATION LIMIT = 29.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .8331    CRITERION= .2949
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4404E-01
    HT FLOW CONVERGENCE VALUE= .1055E-01    CRITERION= .2948    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 26 COMPLETED.    CUM ITER = 737
*** TIME = .304531E+09    TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3762E-04    OSCILLATION LIMIT = 29.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06    UNCHANGED

    HT FLOW CONVERGENCE VALUE= .5769    CRITERION= .2948
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
    HT FLOW CONVERGENCE VALUE= .1050E-01    CRITERION= .2946    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 27 COMPLETED. CUM ITER = 738
*** TIME = .305320E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3708E-04 OSCILLATION LIMIT = 29.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8331 CRITERION= .2946
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4405E-01
HT FLOW CONVERGENCE VALUE= .1054E-01 CRITERION= .2945 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 28 COMPLETED. CUM ITER = 739
*** TIME = .306109E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3761E-04 OSCILLATION LIMIT = 29.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5769 CRITERION= .2945
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
HT FLOW CONVERGENCE VALUE= .1050E-01 CRITERION= .2943 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 29 COMPLETED. CUM ITER = 740
*** TIME = .306898E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3708E-04 OSCILLATION LIMIT = 29.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8330 CRITERION= .2943
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
HT FLOW CONVERGENCE VALUE= .1052E-01 CRITERION= .2943 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 30 COMPLETED. CUM ITER = 741
*** TIME = .307687E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3761E-04 OSCILLATION LIMIT = 29.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5770 CRITERION= .2943
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4407E-01
HT FLOW CONVERGENCE VALUE= .1048E-01 CRITERION= .2941 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 31 COMPLETED. CUM ITER = 742
*** TIME = .308476E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3708E-04 OSCILLATION LIMIT = 29.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8330 CRITERION= .2941
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4408E-01
HT FLOW CONVERGENCE VALUE= .1051E-01 CRITERION= .2940 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 32 COMPLETED. CUM ITER = 743
*** TIME = .309265E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3761E-04 OSCILLATION LIMIT = 29.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5770 CRITERION= .2940
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4408E-01
HT FLOW CONVERGENCE VALUE= .1047E-01 CRITERION= .2938 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 33 COMPLETED. CUM ITER = 744
*** TIME = .310053E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3707E-04 OSCILLATION LIMIT = 29.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8330 CRITERION= .2938
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4409E-01
HT FLOW CONVERGENCE VALUE= .1050E-01 CRITERION= .2937 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 22 SUBSTEP 34 COMPLETED. CUM ITER = 745
*** TIME = .310842E+09 TIME INC = 788940.
*** RESPONSE EIGENVALUE = .3760E-04 OSCILLATION LIMIT = 29.67
*** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5770 CRITERION= .2937

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4409E-01
 HT FLOW CONVERGENCE VALUE= .1046E-01 CRITERION= .2935 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 35 COMPLETED. CUM ITER = 746
 *** TIME = .311631E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3707E-04 OSCILLATION LIMIT = 29.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8330 CRITERION= .2935
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4411E-01
 HT FLOW CONVERGENCE VALUE= .1049E-01 CRITERION= .2934 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 36 COMPLETED. CUM ITER = 747
 *** TIME = .312420E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3760E-04 OSCILLATION LIMIT = 29.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5770 CRITERION= .2934
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4410E-01
 HT FLOW CONVERGENCE VALUE= .1044E-01 CRITERION= .2932 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 37 COMPLETED. CUM ITER = 748
 *** TIME = .313209E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3707E-04 OSCILLATION LIMIT = 29.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8330 CRITERION= .2932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4412E-01
 HT FLOW CONVERGENCE VALUE= .1048E-01 CRITERION= .2932 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 38 COMPLETED. CUM ITER = 749
 *** TIME = .313998E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3760E-04 OSCILLATION LIMIT = 29.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .5771 CRITERION= .2932
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4411E-01
 HT FLOW CONVERGENCE VALUE= .1043E-01 CRITERION= .2930 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 39 COMPLETED. CUM ITER = 750
 *** TIME = .314787E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3706E-04 OSCILLATION LIMIT = 29.24
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+06 UNCHANGED

HT FLOW CONVERGENCE VALUE= .8329 CRITERION= .2930
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4413E-01
 HT FLOW CONVERGENCE VALUE= .1047E-01 CRITERION= .2929 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 22 SUBSTEP 40 COMPLETED. CUM ITER = 751
 *** TIME = .315576E+09 TIME INC = 788940.
 *** RESPONSE EIGENVALUE = .3759E-04 OSCILLATION LIMIT = 29.66

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 08:19:34 JUN 18, 1995 CP= 40909.430
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 31.06 CRITERION= .2945
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5314
 HT FLOW CONVERGENCE VALUE= .1428 CRITERION= .2915 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 1 COMPLETED. CUM ITER = 752
 *** TIME = .323465E+09 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .2150E-04 OSCILLATION LIMIT = 169.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

 HT FLOW CONVERGENCE VALUE= 30.78 CRITERION= .2931
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4824
 HT FLOW CONVERGENCE VALUE= .1371 CRITERION= .2903 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 2 COMPLETED. CUM ITER = 753
 *** TIME = .331355E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2056E-04 OSCILLATION LIMIT = 162.2
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.05 CRITERION= .2919
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4838
 HT FLOW CONVERGENCE VALUE= .1362 CRITERION= .2890 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 3 COMPLETED. CUM ITER = 754
 *** TIME = .339244E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.78 CRITERION= .2906
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4862
 HT FLOW CONVERGENCE VALUE= .1362 CRITERION= .2878 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 4 COMPLETED. CUM ITER = 755
 *** TIME = .347134E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2061E-04 OSCILLATION LIMIT = 162.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.04 CRITERION= .2894
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4846
 HT FLOW CONVERGENCE VALUE= .1352 CRITERION= .2865 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 5 COMPLETED. CUM ITER = 756
 *** TIME = .355023E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.77 CRITERION= .2881
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4872
 HT FLOW CONVERGENCE VALUE= .1353 CRITERION= .2853 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 6 COMPLETED. CUM ITER = 757
 *** TIME = .362912E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2061E-04 OSCILLATION LIMIT = 162.6
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.03 CRITERION= .2869
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4855
 HT FLOW CONVERGENCE VALUE= .1343 CRITERION= .2839 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 7 COMPLETED. CUM ITER = 758
 *** TIME = .370802E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.76 CRITERION= .2855
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4879
 HT FLOW CONVERGENCE VALUE= .1343 CRITERION= .2827 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 8 COMPLETED. CUM ITER = 759
 *** TIME = .378691E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.03 CRITERION= .2843
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4863
 HT FLOW CONVERGENCE VALUE= .1333 CRITERION= .2814 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 23 SUBSTEP 9 COMPLETED. CUM ITER = 760
*** TIME = .386581E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.75 CRITERION= .2830
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4886
HT FLOW CONVERGENCE VALUE= .1333 CRITERION= .2802 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 10 COMPLETED. CUM ITER = 761
*** TIME = .394470E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.02 CRITERION= .2818
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4871
HT FLOW CONVERGENCE VALUE= .1323 CRITERION= .2788 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 11 COMPLETED. CUM ITER = 762
*** TIME = .402359E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.75 CRITERION= .2805
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4894
HT FLOW CONVERGENCE VALUE= .1323 CRITERION= .2776 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 12 COMPLETED. CUM ITER = 763
*** TIME = .410249E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.01 CRITERION= .2793
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4879
HT FLOW CONVERGENCE VALUE= .1313 CRITERION= .2763 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 13 COMPLETED. CUM ITER = 764
*** TIME = .418138E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.74 CRITERION= .2779
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4901
HT FLOW CONVERGENCE VALUE= .1313 CRITERION= .2751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 14 COMPLETED. CUM ITER = 765
*** TIME = .426028E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.00 CRITERION= .2768
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4886
HT FLOW CONVERGENCE VALUE= .1304 CRITERION= .2737 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 15 COMPLETED. CUM ITER = 766
*** TIME = .433917E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.73 CRITERION= .2754
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4908
HT FLOW CONVERGENCE VALUE= .1303 CRITERION= .2725 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 16 COMPLETED. CUM ITER = 767
*** TIME = .441806E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 31.00 CRITERION= .2742
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4894

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HT FLOW CONVERGENCE VALUE= .1291 CRITERION= .2712 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 17 COMPLETED. CUM ITER = 768
 *** TIME = .449696E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.73 CRITERION= .2729
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4916
 HT FLOW CONVERGENCE VALUE= .1290 CRITERION= .2700 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 18 COMPLETED. CUM ITER = 769
 *** TIME = .457585E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2060E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.99 CRITERION= .2717
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4903
 HT FLOW CONVERGENCE VALUE= .1279 CRITERION= .2687 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 19 COMPLETED. CUM ITER = 770
 *** TIME = .465475E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.72 CRITERION= .2704
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4924
 HT FLOW CONVERGENCE VALUE= .1278 CRITERION= .2674 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 20 COMPLETED. CUM ITER = 771
 *** TIME = .473364E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.98 CRITERION= .2692
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4911
 HT FLOW CONVERGENCE VALUE= .1268 CRITERION= .2661 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 21 COMPLETED. CUM ITER = 772
 *** TIME = .481253E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.71 CRITERION= .2678
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4931
 HT FLOW CONVERGENCE VALUE= .1267 CRITERION= .2649 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 22 COMPLETED. CUM ITER = 773
 *** TIME = .489143E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.98 CRITERION= .2666
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4920
 HT FLOW CONVERGENCE VALUE= .1257 CRITERION= .2636 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 23 COMPLETED. CUM ITER = 774
 *** TIME = .497032E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.70 CRITERION= .2653
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4940
 HT FLOW CONVERGENCE VALUE= .1256 CRITERION= .2623 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 24 COMPLETED. CUM ITER = 775
 *** TIME = .504922E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.97 CRITERION= .2641
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4929
 HT FLOW CONVERGENCE VALUE= .1247 CRITERION= .2610 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 25 COMPLETED. CUM ITER = 776
 *** TIME = .512811E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.70 CRITERION= .2628
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4949
 HT FLOW CONVERGENCE VALUE= .1247 CRITERION= .2598 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 26 COMPLETED. CUM ITER = 777
 *** TIME = .520700E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.96 CRITERION= .2616
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4938
 HT FLOW CONVERGENCE VALUE= .1238 CRITERION= .2585 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 27 COMPLETED. CUM ITER = 778
 *** TIME = .528590E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.69 CRITERION= .2602
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4957
 HT FLOW CONVERGENCE VALUE= .1237 CRITERION= .2572 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 28 COMPLETED. CUM ITER = 779
 *** TIME = .536479E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.95 CRITERION= .2590
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4947
 HT FLOW CONVERGENCE VALUE= .1228 CRITERION= .2559 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 29 COMPLETED. CUM ITER = 780
 *** TIME = .544369E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.68 CRITERION= .2577
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4966
 HT FLOW CONVERGENCE VALUE= .1227 CRITERION= .2547 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 30 COMPLETED. CUM ITER = 781
 *** TIME = .552258E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.95 CRITERION= .2565
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4956
 HT FLOW CONVERGENCE VALUE= .1219 CRITERION= .2534 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 31 COMPLETED. CUM ITER = 782
 *** TIME = .560147E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2053E-04 OSCILLATION LIMIT = 162.0
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.67 CRITERION= .2552
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4975
 HT FLOW CONVERGENCE VALUE= .1217 CRITERION= .2521 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 23 SUBSTEP 32 COMPLETED. CUM ITER = 783
 *** TIME = .568037E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5


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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.94 CRITERION= .2540
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4965
HT FLOW CONVERGENCE VALUE= .1207 CRITERION= .2508 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 33 COMPLETED. CUM ITER = 784
*** TIME = .575926E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2054E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.67 CRITERION= .2526
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4983
HT FLOW CONVERGENCE VALUE= .1204 CRITERION= .2496 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 34 COMPLETED. CUM ITER = 785
*** TIME = .583816E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.93 CRITERION= .2514
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4974
HT FLOW CONVERGENCE VALUE= .1196 CRITERION= .2482 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 35 COMPLETED. CUM ITER = 786
*** TIME = .591705E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2054E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.66 CRITERION= .2501
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4992
HT FLOW CONVERGENCE VALUE= .1196 CRITERION= .2470 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 36 COMPLETED. CUM ITER = 787
*** TIME = .599594E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.92 CRITERION= .2489
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4984
HT FLOW CONVERGENCE VALUE= .1188 CRITERION= .2457 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 37 COMPLETED. CUM ITER = 788
*** TIME = .607484E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2054E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.65 CRITERION= .2475
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5001
HT FLOW CONVERGENCE VALUE= .1186 CRITERION= .2445 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 38 COMPLETED. CUM ITER = 789
*** TIME = .615373E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.92 CRITERION= .2464
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4994
HT FLOW CONVERGENCE VALUE= .1179 CRITERION= .2431 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 39 COMPLETED. CUM ITER = 790
*** TIME = .623263E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .2054E-04 OSCILLATION LIMIT = 162.0
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.64 CRITERION= .2450
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5011
HT FLOW CONVERGENCE VALUE= .1178 CRITERION= .2419 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 23 SUBSTEP 40 COMPLETED. CUM ITER = 791

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*** TIME = .631152E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .2059E-04 OSCILLATION LIMIT = 162.5

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 08:57:02 JUN 18, 1995 CP= 43120.210
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 59.05 CRITERION= .2490
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4479
 HT FLOW CONVERGENCE VALUE= .1287 CRITERION= .2409 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 1 COMPLETED. CUM ITER = 792
 *** TIME = .639041E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1073E-04 OSCILLATION LIMIT = 84.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.76 CRITERION= .2479
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4479
 HT FLOW CONVERGENCE VALUE= .1272 CRITERION= .2400 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 2 COMPLETED. CUM ITER = 793
 *** TIME = .646931E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 84.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 59.02 CRITERION= .2471
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4477
 HT FLOW CONVERGENCE VALUE= .1266 CRITERION= .2390 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 3 COMPLETED. CUM ITER = 794
 *** TIME = .654820E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1068E-04 OSCILLATION LIMIT = 84.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.74 CRITERION= .2461
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4489
 HT FLOW CONVERGENCE VALUE= .1265 CRITERION= .2381 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 4 COMPLETED. CUM ITER = 795
 *** TIME = .662710E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1074E-04 OSCILLATION LIMIT = 84.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.99 CRITERION= .2452
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4484
 HT FLOW CONVERGENCE VALUE= .1258 CRITERION= .2371 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 5 COMPLETED. CUM ITER = 796
 *** TIME = .670599E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1069E-04 OSCILLATION LIMIT = 84.37
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.71 CRITERION= .2442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4496
 HT FLOW CONVERGENCE VALUE= .1256 CRITERION= .2362 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 6 COMPLETED. CUM ITER = 797
 *** TIME = .678488E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1075E-04 OSCILLATION LIMIT = 84.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.97 CRITERION= .2434
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4491
 HT FLOW CONVERGENCE VALUE= .1249 CRITERION= .2352 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 7 COMPLETED. CUM ITER = 798
*** TIME = .686378E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1070E-04 OSCILLATION LIMIT = 84.45
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.69 CRITERION= .2424
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4503
HT FLOW CONVERGENCE VALUE= .1247 CRITERION= .2343 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 8 COMPLETED. CUM ITER = 799
*** TIME = .694267E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1076E-04 OSCILLATION LIMIT = 84.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.94 CRITERION= .2416
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4498
HT FLOW CONVERGENCE VALUE= .1239 CRITERION= .2333 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 9 COMPLETED. CUM ITER = 800
*** TIME = .702157E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1072E-04 OSCILLATION LIMIT = 84.55
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.66 CRITERION= .2405
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4510
HT FLOW CONVERGENCE VALUE= .1236 CRITERION= .2324 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 10 COMPLETED. CUM ITER = 801
*** TIME = .710046E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1077E-04 OSCILLATION LIMIT = 84.95
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.91 CRITERION= .2397
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4506
HT FLOW CONVERGENCE VALUE= .1229 CRITERION= .2314 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 11 COMPLETED. CUM ITER = 802
*** TIME = .717935E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1073E-04 OSCILLATION LIMIT = 84.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.63 CRITERION= .2387
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4517
HT FLOW CONVERGENCE VALUE= .1227 CRITERION= .2305 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 12 COMPLETED. CUM ITER = 803
*** TIME = .725825E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = 85.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.89 CRITERION= .2379
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4513
HT FLOW CONVERGENCE VALUE= .1219 CRITERION= .2295 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 13 COMPLETED. CUM ITER = 804
*** TIME = .733714E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1074E-04 OSCILLATION LIMIT = 84.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.61 CRITERION= .2369
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4524
HT FLOW CONVERGENCE VALUE= .1216 CRITERION= .2286 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 14 COMPLETED. CUM ITER = 805
*** TIME = .741604E+09 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.11
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.86 CRITERION= .2360

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4521
 HT FLOW CONVERGENCE VALUE= .1209 CRITERION= .2276 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 15 COMPLETED. CUM ITER = 806
 *** TIME = .749493E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1075E-04 OSCILLATION LIMIT = 84.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.58 CRITERION= .2350
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4532
 HT FLOW CONVERGENCE VALUE= .1208 CRITERION= .2267 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 16 COMPLETED. CUM ITER = 807
 *** TIME = .757382E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1080E-04 OSCILLATION LIMIT = 85.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.83 CRITERION= .2342
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4528
 HT FLOW CONVERGENCE VALUE= .1200 CRITERION= .2257 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 17 COMPLETED. CUM ITER = 808
 *** TIME = .765272E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1076E-04 OSCILLATION LIMIT = 84.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.55 CRITERION= .2332
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4539
 HT FLOW CONVERGENCE VALUE= .1198 CRITERION= .2248 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 18 COMPLETED. CUM ITER = 809
 *** TIME = .773161E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1081E-04 OSCILLATION LIMIT = 85.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.81 CRITERION= .2323
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4536
 HT FLOW CONVERGENCE VALUE= .1190 CRITERION= .2238 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 19 COMPLETED. CUM ITER = 810
 *** TIME = .781051E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1077E-04 OSCILLATION LIMIT = 84.98
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.53 CRITERION= .2313
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4546
 HT FLOW CONVERGENCE VALUE= .1187 CRITERION= .2229 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 20 COMPLETED. CUM ITER = 811
 *** TIME = .788940E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1082E-04 OSCILLATION LIMIT = 85.35
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.78 CRITERION= .2305
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4544
 HT FLOW CONVERGENCE VALUE= .1179 CRITERION= .2219 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 21 COMPLETED. CUM ITER = 812
 *** TIME = .796829E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1078E-04 OSCILLATION LIMIT = 85.07
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.50 CRITERION= .2295
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4554
 HT FLOW CONVERGENCE VALUE= .1177 CRITERION= .2210 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 22 COMPLETED. CUM ITER = 813
 *** TIME = .804719E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1083E-04 OSCILLATION LIMIT = 85.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.75 CRITERION= .2287
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4552
 HT FLOW CONVERGENCE VALUE= .1168 CRITERION= .2200 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 23 COMPLETED. CUM ITER = 814
 *** TIME = .812608E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1079E-04 OSCILLATION LIMIT = 85.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.47 CRITERION= .2276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4562
 HT FLOW CONVERGENCE VALUE= .1163 CRITERION= .2191 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 24 COMPLETED. CUM ITER = 815
 *** TIME = .820498E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1084E-04 OSCILLATION LIMIT = 85.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.73 CRITERION= .2268
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4560
 HT FLOW CONVERGENCE VALUE= .1157 CRITERION= .2181 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 25 COMPLETED. CUM ITER = 816
 *** TIME = .828387E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1081E-04 OSCILLATION LIMIT = 85.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.45 CRITERION= .2258
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4570
 HT FLOW CONVERGENCE VALUE= .1155 CRITERION= .2172 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 26 COMPLETED. CUM ITER = 817
 *** TIME = .836276E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1085E-04 OSCILLATION LIMIT = 85.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.70 CRITERION= .2250
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4568
 HT FLOW CONVERGENCE VALUE= .1149 CRITERION= .2162 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 27 COMPLETED. CUM ITER = 818
 *** TIME = .844166E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1082E-04 OSCILLATION LIMIT = 85.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.42 CRITERION= .2240
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4578
 HT FLOW CONVERGENCE VALUE= .1150 CRITERION= .2153 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 28 COMPLETED. CUM ITER = 819
 *** TIME = .852055E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1086E-04 OSCILLATION LIMIT = 85.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.67 CRITERION= .2231
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4576
 HT FLOW CONVERGENCE VALUE= .1145 CRITERION= .2143 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 29 COMPLETED. CUM ITER = 820
 *** TIME = .859945E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1083E-04 OSCILLATION LIMIT = 85.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.39 CRITERION= .2221
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4585
 HT FLOW CONVERGENCE VALUE= .1145 CRITERION= .2134 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 24 SUBSTEP 30 COMPLETED. CUM ITER = 821
 *** TIME = .867834E+09 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .1087E-04  OSCILLATION LIMIT = 85.78
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.65  CRITERION= .2213
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4584
  HT FLOW CONVERGENCE VALUE= .1138  CRITERION= .2124  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 31 COMPLETED. CUM ITER = 822
*** TIME = .875723E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1084E-04  OSCILLATION LIMIT = 85.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.37  CRITERION= .2203
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4594
  HT FLOW CONVERGENCE VALUE= .1139  CRITERION= .2115  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 32 COMPLETED. CUM ITER = 823
*** TIME = .883613E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1088E-04  OSCILLATION LIMIT = 85.87
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.62  CRITERION= .2195
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4593
  HT FLOW CONVERGENCE VALUE= .1132  CRITERION= .2105  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 33 COMPLETED. CUM ITER = 824
*** TIME = .891502E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1085E-04  OSCILLATION LIMIT = 85.63
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.34  CRITERION= .2184
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4602
  HT FLOW CONVERGENCE VALUE= .1130  CRITERION= .2096  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 34 COMPLETED. CUM ITER = 825
*** TIME = .899392E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1090E-04  OSCILLATION LIMIT = 85.96
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.60  CRITERION= .2176
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4601
  HT FLOW CONVERGENCE VALUE= .1123  CRITERION= .2086  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 35 COMPLETED. CUM ITER = 826
*** TIME = .907281E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1087E-04  OSCILLATION LIMIT = 85.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.31  CRITERION= .2166
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4610
  HT FLOW CONVERGENCE VALUE= .1122  CRITERION= .2077  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 36 COMPLETED. CUM ITER = 827
*** TIME = .915170E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1091E-04  OSCILLATION LIMIT = 86.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.57  CRITERION= .2158
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4610
  HT FLOW CONVERGENCE VALUE= .1116  CRITERION= .2067  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 24 SUBSTEP 37 COMPLETED. CUM ITER = 828
*** TIME = .923060E+09  TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .1088E-04  OSCILLATION LIMIT = 85.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07  UNCHANGED

  HT FLOW CONVERGENCE VALUE= 58.29  CRITERION= .2148
  EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4619
  HT FLOW CONVERGENCE VALUE= .1114  CRITERION= .2058  <<< CONVERGED
  >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 24 SUBSTEP 38 COMPLETED. CUM ITER = 829
 *** TIME = .930949E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1092E-04 OSCILLATION LIMIT = 86.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.54 CRITERION= .2139
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4618
 HT FLOW CONVERGENCE VALUE= .1108 CRITERION= .2048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 39 COMPLETED. CUM ITER = 830
 *** TIME = .938839E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1089E-04 OSCILLATION LIMIT = 85.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.26 CRITERION= .2129
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4627
 HT FLOW CONVERGENCE VALUE= .1105 CRITERION= .2039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 24 SUBSTEP 40 COMPLETED. CUM ITER = 831
 *** TIME = .946728E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .1093E-04 OSCILLATION LIMIT = 86.22

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 09:34:37 JUN 18, 1995 CP= 45333.670
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 67.52 CRITERION= .2148
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3973
 HT FLOW CONVERGENCE VALUE= .1070 CRITERION= .2031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 1 COMPLETED. CUM ITER = 832
 *** TIME = .954617E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6815E-05 OSCILLATION LIMIT = 53.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.24 CRITERION= .2140
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4001
 HT FLOW CONVERGENCE VALUE= .1065 CRITERION= .2025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 2 COMPLETED. CUM ITER = 833
 *** TIME = .962507E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6882E-05 OSCILLATION LIMIT = 54.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.49 CRITERION= .2134
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4007
 HT FLOW CONVERGENCE VALUE= .1060 CRITERION= .2017 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 3 COMPLETED. CUM ITER = 834
 *** TIME = .970396E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6882E-05 OSCILLATION LIMIT = 54.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.20 CRITERION= .2126
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4006
 HT FLOW CONVERGENCE VALUE= .1057 CRITERION= .2010 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 25 SUBSTEP 4 COMPLETED. CUM ITER = 835
 *** TIME = .978286E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6894E-05 OSCILLATION LIMIT = 54.39
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.45 CRITERION= .2120
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4013

HT FLOW CONVERGENCE VALUE= .1052 CRITERION= .2003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 5 COMPLETED. CUM ITER = 836
 *** TIME = .986175E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6892E-05 OSCILLATION LIMIT = 54.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.16 CRITERION= .2112
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4013
 HT FLOW CONVERGENCE VALUE= .1051 CRITERION= .1996 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 6 COMPLETED. CUM ITER = 837
 *** TIME = .994064E+09 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6906E-05 OSCILLATION LIMIT = 54.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.41 CRITERION= .2106
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4019
 HT FLOW CONVERGENCE VALUE= .1047 CRITERION= .1988 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 7 COMPLETED. CUM ITER = 838
 *** TIME = .100195E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6904E-05 OSCILLATION LIMIT = 54.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.13 CRITERION= .2098
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4019
 HT FLOW CONVERGENCE VALUE= .1046 CRITERION= .1982 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 8 COMPLETED. CUM ITER = 839
 *** TIME = .100984E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6917E-05 OSCILLATION LIMIT = 54.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.38 CRITERION= .2092
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4025
 HT FLOW CONVERGENCE VALUE= .1042 CRITERION= .1974 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 9 COMPLETED. CUM ITER = 840
 *** TIME = .101773E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6914E-05 OSCILLATION LIMIT = 54.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.09 CRITERION= .2085
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4024
 HT FLOW CONVERGENCE VALUE= .1039 CRITERION= .1967 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 10 COMPLETED. CUM ITER = 841
 *** TIME = .102562E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6927E-05 OSCILLATION LIMIT = 54.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.34 CRITERION= .2079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4031
 HT FLOW CONVERGENCE VALUE= .1035 CRITERION= .1959 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 11 COMPLETED. CUM ITER = 842
 *** TIME = .103351E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6925E-05 OSCILLATION LIMIT = 54.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.06 CRITERION= .2071
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4030
 HT FLOW CONVERGENCE VALUE= .1033 CRITERION= .1953 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 12 COMPLETED. CUM ITER = 843
 *** TIME = .104140E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6937E-05 OSCILLATION LIMIT = 54.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.31 CRITERION= .2065
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4037
 HT FLOW CONVERGENCE VALUE= .1029 CRITERION= .1945 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 13 COMPLETED. CUM ITER = 844
 *** TIME = .104929E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6934E-05 OSCILLATION LIMIT = 54.71
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.02 CRITERION= .2057
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4036
 HT FLOW CONVERGENCE VALUE= .1026 CRITERION= .1938 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 14 COMPLETED. CUM ITER = 845
 *** TIME = .105718E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6947E-05 OSCILLATION LIMIT = 54.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.27 CRITERION= .2051
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4042
 HT FLOW CONVERGENCE VALUE= .1022 CRITERION= .1931 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 15 COMPLETED. CUM ITER = 846
 *** TIME = .106507E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6944E-05 OSCILLATION LIMIT = 54.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.99 CRITERION= .2043
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4042
 HT FLOW CONVERGENCE VALUE= .1020 CRITERION= .1924 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 16 COMPLETED. CUM ITER = 847
 *** TIME = .107296E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6957E-05 OSCILLATION LIMIT = 54.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.24 CRITERION= .2038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4049
 HT FLOW CONVERGENCE VALUE= .1015 CRITERION= .1916 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 17 COMPLETED. CUM ITER = 848
 *** TIME = .108085E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6953E-05 OSCILLATION LIMIT = 54.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.95 CRITERION= .2030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4048
 HT FLOW CONVERGENCE VALUE= .1012 CRITERION= .1910 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 18 COMPLETED. CUM ITER = 849
 *** TIME = .108874E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6967E-05 OSCILLATION LIMIT = 54.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.20 CRITERION= .2024
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4055
 HT FLOW CONVERGENCE VALUE= .1007 CRITERION= .1902 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 19 COMPLETED. CUM ITER = 850
 *** TIME = .109663E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6964E-05 OSCILLATION LIMIT = 54.94
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.92 CRITERION= .2016
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4054
 HT FLOW CONVERGENCE VALUE= .1004 CRITERION= .1895 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 20 COMPLETED. CUM ITER = 851
 *** TIME = .110452E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6978E-05 OSCILLATION LIMIT = 55.05

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.17 CRITERION= .2010
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4061
 HT FLOW CONVERGENCE VALUE= .9989E-01 CRITERION= .1887 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 21 COMPLETED. CUM ITER = 852
 *** TIME = .111241E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6975E-05 OSCILLATION LIMIT = 55.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.88 CRITERION= .2002
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4061
 HT FLOW CONVERGENCE VALUE= .9903E-01 CRITERION= .1881 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 22 COMPLETED. CUM ITER = 853
 *** TIME = .112029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6989E-05 OSCILLATION LIMIT = 55.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.13 CRITERION= .1996
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4068
 HT FLOW CONVERGENCE VALUE= .9724E-01 CRITERION= .1873 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 23 COMPLETED. CUM ITER = 854
 *** TIME = .112818E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6986E-05 OSCILLATION LIMIT = 55.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.85 CRITERION= .1988
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4068
 HT FLOW CONVERGENCE VALUE= .9594E-01 CRITERION= .1866 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 24 COMPLETED. CUM ITER = 855
 *** TIME = .113607E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6999E-05 OSCILLATION LIMIT = 55.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.10 CRITERION= .1983
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4075
 HT FLOW CONVERGENCE VALUE= .9264E-01 CRITERION= .1858 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 25 COMPLETED. CUM ITER = 856
 *** TIME = .114396E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6996E-05 OSCILLATION LIMIT = 55.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.81 CRITERION= .1975
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4074
 HT FLOW CONVERGENCE VALUE= .9237E-01 CRITERION= .1852 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 26 COMPLETED. CUM ITER = 857
 *** TIME = .115185E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7009E-05 OSCILLATION LIMIT = 55.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 67.06 CRITERION= .1969
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4081
 HT FLOW CONVERGENCE VALUE= .9193E-01 CRITERION= .1844 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 27 COMPLETED. CUM ITER = 858
 *** TIME = .115974E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .7005E-05 OSCILLATION LIMIT = 55.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.78 CRITERION= .1961
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4080
 HT FLOW CONVERGENCE VALUE= .9159E-01 CRITERION= .1837 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 25 SUBSTEP 28 COMPLETED. CUM ITER = 859

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*** TIME = .116763E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7019E-05    OSCILLATION LIMIT = 55.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 67.03    CRITERION= .1955
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4088
    HT FLOW CONVERGENCE VALUE= .9009E-01    CRITERION= .1830    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 29 COMPLETED. CUM ITER = 860
*** TIME = .117552E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7014E-05    OSCILLATION LIMIT = 55.34
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.74    CRITERION= .1947
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4087
    HT FLOW CONVERGENCE VALUE= .8898E-01    CRITERION= .1823    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 30 COMPLETED. CUM ITER = 861
*** TIME = .118341E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7028E-05    OSCILLATION LIMIT = 55.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.99    CRITERION= .1942
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4094
    HT FLOW CONVERGENCE VALUE= .8872E-01    CRITERION= .1815    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 31 COMPLETED. CUM ITER = 862
*** TIME = .119130E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7023E-05    OSCILLATION LIMIT = 55.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.71    CRITERION= .1934
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4094
    HT FLOW CONVERGENCE VALUE= .8846E-01    CRITERION= .1808    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 32 COMPLETED. CUM ITER = 863
*** TIME = .119919E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7037E-05    OSCILLATION LIMIT = 55.52
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.96    CRITERION= .1928
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4101
    HT FLOW CONVERGENCE VALUE= .8797E-01    CRITERION= .1801    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 33 COMPLETED. CUM ITER = 864
*** TIME = .120708E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7033E-05    OSCILLATION LIMIT = 55.48
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.67    CRITERION= .1920
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4101
    HT FLOW CONVERGENCE VALUE= .8779E-01    CRITERION= .1794    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 34 COMPLETED. CUM ITER = 865
*** TIME = .121497E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7047E-05    OSCILLATION LIMIT = 55.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.92    CRITERION= .1914
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4108
    HT FLOW CONVERGENCE VALUE= .8739E-01    CRITERION= .1786    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 35 COMPLETED. CUM ITER = 866
*** TIME = .122286E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7043E-05    OSCILLATION LIMIT = 55.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 66.64    CRITERION= .1906
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4108
    HT FLOW CONVERGENCE VALUE= .8744E-01    CRITERION= .1780    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 36 COMPLETED. CUM ITER = 867
*** TIME = .123075E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7057E-05 OSCILLATION LIMIT = 55.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.89 CRITERION= .1901
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4116
HT FLOW CONVERGENCE VALUE= .8710E-01 CRITERION= .1772 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 37 COMPLETED. CUM ITER = 868
*** TIME = .123864E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7053E-05 OSCILLATION LIMIT = 55.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.60 CRITERION= .1893
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4116
HT FLOW CONVERGENCE VALUE= .8684E-01 CRITERION= .1765 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 38 COMPLETED. CUM ITER = 869
*** TIME = .124653E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7068E-05 OSCILLATION LIMIT = 55.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.85 CRITERION= .1887
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4123
HT FLOW CONVERGENCE VALUE= .8594E-01 CRITERION= .1757 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 39 COMPLETED. CUM ITER = 870
*** TIME = .125441E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7063E-05 OSCILLATION LIMIT = 55.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 66.57 CRITERION= .1879
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4122
HT FLOW CONVERGENCE VALUE= .8565E-01 CRITERION= .1751 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 25 SUBSTEP 40 COMPLETED. CUM ITER = 871
*** TIME = .126230E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .7077E-05 OSCILLATION LIMIT = 55.83

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 10:12:10 JUN 18, 1995 CP= 47549.540
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 58.99 CRITERION= .1847
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3413
HT FLOW CONVERGENCE VALUE= .7268E-01 CRITERION= .1744 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 1 COMPLETED. CUM ITER = 872
*** TIME = .127019E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6269E-05 OSCILLATION LIMIT = 49.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.71 CRITERION= .1840
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3456
HT FLOW CONVERGENCE VALUE= .7303E-01 CRITERION= .1739 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 26 SUBSTEP 2 COMPLETED. CUM ITER = 873
*** TIME = .127808E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6396E-05 OSCILLATION LIMIT = 50.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.96 CRITERION= .1836

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3471
 HT FLOW CONVERGENCE VALUE= .7290E-01 CRITERION= .1732 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 3 COMPLETED. CUM ITER = 874
 *** TIME = .128597E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6425E-05 OSCILLATION LIMIT = 50.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.68 CRITERION= .1829
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3458
 HT FLOW CONVERGENCE VALUE= .7261E-01 CRITERION= .1727 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 4 COMPLETED. CUM ITER = 875
 *** TIME = .129386E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6398E-05 OSCILLATION LIMIT = 50.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.94 CRITERION= .1824
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3475
 HT FLOW CONVERGENCE VALUE= .7239E-01 CRITERION= .1720 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 5 COMPLETED. CUM ITER = 876
 *** TIME = .130175E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6433E-05 OSCILLATION LIMIT = 50.75
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.65 CRITERION= .1818
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3462
 HT FLOW CONVERGENCE VALUE= .7216E-01 CRITERION= .1715 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 6 COMPLETED. CUM ITER = 877
 *** TIME = .130964E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6408E-05 OSCILLATION LIMIT = 50.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.91 CRITERION= .1813
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3479
 HT FLOW CONVERGENCE VALUE= .7201E-01 CRITERION= .1709 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 7 COMPLETED. CUM ITER = 878
 *** TIME = .131753E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6442E-05 OSCILLATION LIMIT = 50.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.63 CRITERION= .1806
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3467
 HT FLOW CONVERGENCE VALUE= .7157E-01 CRITERION= .1703 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 8 COMPLETED. CUM ITER = 879
 *** TIME = .132542E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6417E-05 OSCILLATION LIMIT = 50.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.88 CRITERION= .1802
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3484
 HT FLOW CONVERGENCE VALUE= .7160E-01 CRITERION= .1697 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 9 COMPLETED. CUM ITER = 880
 *** TIME = .133331E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6449E-05 OSCILLATION LIMIT = 50.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.60 CRITERION= .1795
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3472
 HT FLOW CONVERGENCE VALUE= .7135E-01 CRITERION= .1692 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 10 COMPLETED. CUM ITER = 881
 *** TIME = .134120E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6424E-05 OSCILLATION LIMIT = 50.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.85 CRITERION= .1791
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3487
 HT FLOW CONVERGENCE VALUE= .7118E-01 CRITERION= .1685 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 11 COMPLETED. CUM ITER = 882
 *** TIME = .134909E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6455E-05 OSCILLATION LIMIT = 50.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.57 CRITERION= .1784
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3476
 HT FLOW CONVERGENCE VALUE= .7088E-01 CRITERION= .1680 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 12 COMPLETED. CUM ITER = 883
 *** TIME = .135698E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6433E-05 OSCILLATION LIMIT = 50.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.83 CRITERION= .1779
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3491
 HT FLOW CONVERGENCE VALUE= .7077E-01 CRITERION= .1673 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 13 COMPLETED. CUM ITER = 884
 *** TIME = .136487E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6463E-05 OSCILLATION LIMIT = 50.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.54 CRITERION= .1773
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3480
 HT FLOW CONVERGENCE VALUE= .7043E-01 CRITERION= .1668 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 14 COMPLETED. CUM ITER = 885
 *** TIME = .137276E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6442E-05 OSCILLATION LIMIT = 50.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.80 CRITERION= .1768
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3495
 HT FLOW CONVERGENCE VALUE= .7035E-01 CRITERION= .1661 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 15 COMPLETED. CUM ITER = 886
 *** TIME = .138065E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6470E-05 OSCILLATION LIMIT = 51.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.52 CRITERION= .1761
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3484
 HT FLOW CONVERGENCE VALUE= .7010E-01 CRITERION= .1656 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 16 COMPLETED. CUM ITER = 887
 *** TIME = .138853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6450E-05 OSCILLATION LIMIT = 50.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.77 CRITERION= .1757
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3499
 HT FLOW CONVERGENCE VALUE= .6994E-01 CRITERION= .1650 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 17 COMPLETED. CUM ITER = 888
 *** TIME = .139642E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6477E-05 OSCILLATION LIMIT = 51.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.49 CRITERION= .1750
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3489
 HT FLOW CONVERGENCE VALUE= .6971E-01 CRITERION= .1644 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 18 COMPLETED. CUM ITER = 889
 *** TIME = .140431E+10 TIME INC = .788940E+07

*** RESPONSE EIGENVALUE = .6460E-05 OSCILLATION LIMIT = 50.96
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.74 CRITERION= .1746
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3504
 HT FLOW CONVERGENCE VALUE= .6946E-01 CRITERION= .1638 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 19 COMPLETED. CUM ITER = 890
 *** TIME = .141220E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6487E-05 OSCILLATION LIMIT = 51.17
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.46 CRITERION= .1739
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3494
 HT FLOW CONVERGENCE VALUE= .6931E-01 CRITERION= .1633 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 20 COMPLETED. CUM ITER = 891
 *** TIME = .142009E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6469E-05 OSCILLATION LIMIT = 51.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.72 CRITERION= .1734
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3508
 HT FLOW CONVERGENCE VALUE= .6910E-01 CRITERION= .1626 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 21 COMPLETED. CUM ITER = 892
 *** TIME = .142798E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6494E-05 OSCILLATION LIMIT = 51.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.43 CRITERION= .1728
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3498
 HT FLOW CONVERGENCE VALUE= .6874E-01 CRITERION= .1621 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 22 COMPLETED. CUM ITER = 893
 *** TIME = .143587E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6477E-05 OSCILLATION LIMIT = 51.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.69 CRITERION= .1723
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3512
 HT FLOW CONVERGENCE VALUE= .6880E-01 CRITERION= .1614 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 23 COMPLETED. CUM ITER = 894
 *** TIME = .144376E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6501E-05 OSCILLATION LIMIT = 51.29
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.41 CRITERION= .1716
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3502
 HT FLOW CONVERGENCE VALUE= .6854E-01 CRITERION= .1609 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 24 COMPLETED. CUM ITER = 895
 *** TIME = .145165E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6485E-05 OSCILLATION LIMIT = 51.16
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.66 CRITERION= .1712
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3516
 HT FLOW CONVERGENCE VALUE= .6829E-01 CRITERION= .1602 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 25 COMPLETED. CUM ITER = 896
 *** TIME = .145954E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6508E-05 OSCILLATION LIMIT = 51.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.38 CRITERION= .1705
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3507
 HT FLOW CONVERGENCE VALUE= .6795E-01 CRITERION= .1597 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 26 COMPLETED. CUM ITER = 897
 *** TIME = .146743E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6493E-05 OSCILLATION LIMIT = 51.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.63 CRITERION= .1701
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3520
 HT FLOW CONVERGENCE VALUE= .6773E-01 CRITERION= .1590 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 27 COMPLETED. CUM ITER = 898
 *** TIME = .147532E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6516E-05 OSCILLATION LIMIT = 51.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.35 CRITERION= .1694
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3512
 HT FLOW CONVERGENCE VALUE= .6757E-01 CRITERION= .1585 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 28 COMPLETED. CUM ITER = 899
 *** TIME = .148321E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6503E-05 OSCILLATION LIMIT = 51.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.61 CRITERION= .1690
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3525
 HT FLOW CONVERGENCE VALUE= .6723E-01 CRITERION= .1579 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 29 COMPLETED. CUM ITER = 900
 *** TIME = .149110E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6524E-05 OSCILLATION LIMIT = 51.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.32 CRITERION= .1683
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3516
 HT FLOW CONVERGENCE VALUE= .6712E-01 CRITERION= .1573 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 30 COMPLETED. CUM ITER = 901
 *** TIME = .149899E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6510E-05 OSCILLATION LIMIT = 51.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.58 CRITERION= .1678
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3529
 HT FLOW CONVERGENCE VALUE= .6692E-01 CRITERION= .1567 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 31 COMPLETED. CUM ITER = 902
 *** TIME = .150688E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6531E-05 OSCILLATION LIMIT = 51.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.30 CRITERION= .1672
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3521
 HT FLOW CONVERGENCE VALUE= .6653E-01 CRITERION= .1561 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 32 COMPLETED. CUM ITER = 903
 *** TIME = .151476E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6519E-05 OSCILLATION LIMIT = 51.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.55 CRITERION= .1667
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3533
 HT FLOW CONVERGENCE VALUE= .6633E-01 CRITERION= .1555 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 26 SUBSTEP 33 COMPLETED. CUM ITER = 904
 *** TIME = .152265E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6538E-05 OSCILLATION LIMIT = 51.58
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.27 CRITERION= .1660
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3525

HT FLOW CONVERGENCE VALUE= .6615E-01 CRITERION= .1550 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 34 COMPLETED. CUM ITER = 905
 *** TIME = .153054E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6527E-05 OSCILLATION LIMIT = 51.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.52 CRITERION= .1656
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3537
 HT FLOW CONVERGENCE VALUE= .6586E-01 CRITERION= .1543 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 35 COMPLETED. CUM ITER = 906
 *** TIME = .153843E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6546E-05 OSCILLATION LIMIT = 51.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.24 CRITERION= .1649
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3530
 HT FLOW CONVERGENCE VALUE= .6565E-01 CRITERION= .1538 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 36 COMPLETED. CUM ITER = 907
 *** TIME = .154632E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6536E-05 OSCILLATION LIMIT = 51.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.50 CRITERION= .1645
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3542
 HT FLOW CONVERGENCE VALUE= .6542E-01 CRITERION= .1531 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 37 COMPLETED. CUM ITER = 908
 *** TIME = .155421E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6554E-05 OSCILLATION LIMIT = 51.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.21 CRITERION= .1638
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3534
 HT FLOW CONVERGENCE VALUE= .6517E-01 CRITERION= .1526 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 38 COMPLETED. CUM ITER = 909
 *** TIME = .156210E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6545E-05 OSCILLATION LIMIT = 51.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.47 CRITERION= .1633
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3546
 HT FLOW CONVERGENCE VALUE= .6487E-01 CRITERION= .1519 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 39 COMPLETED. CUM ITER = 910
 *** TIME = .156999E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6562E-05 OSCILLATION LIMIT = 51.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 58.19 CRITERION= .1627
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3539
 HT FLOW CONVERGENCE VALUE= .6449E-01 CRITERION= .1514 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 26 SUBSTEP 40 COMPLETED. CUM ITER = 911
 *** TIME = .157788E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6553E-05 OSCILLATION LIMIT = 51.70

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 10:49:44 JUN 18, 1995 CP= 49767.960
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 49.15 CRITERION= .1591
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2796
 HT FLOW CONVERGENCE VALUE= .5249E-01 CRITERION= .1509 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 1 COMPLETED. CUM ITER = 912
 *** TIME = .158577E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5793E-05 OSCILLATION LIMIT = 45.70
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.88 CRITERION= .1586
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2830
 HT FLOW CONVERGENCE VALUE= .5261E-01 CRITERION= .1505 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 2 COMPLETED. CUM ITER = 913
 *** TIME = .159366E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5909E-05 OSCILLATION LIMIT = 46.62
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.14 CRITERION= .1583
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2851
 HT FLOW CONVERGENCE VALUE= .5257E-01 CRITERION= .1499 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 3 COMPLETED. CUM ITER = 914
 *** TIME = .160155E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5975E-05 OSCILLATION LIMIT = 47.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.86 CRITERION= .1577
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2831
 HT FLOW CONVERGENCE VALUE= .5227E-01 CRITERION= .1496 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 4 COMPLETED. CUM ITER = 915
 *** TIME = .160944E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5910E-05 OSCILLATION LIMIT = 46.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.12 CRITERION= .1574
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2854
 HT FLOW CONVERGENCE VALUE= .5216E-01 CRITERION= .1490 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 5 COMPLETED. CUM ITER = 916
 *** TIME = .161733E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5980E-05 OSCILLATION LIMIT = 47.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.84 CRITERION= .1568
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2834
 HT FLOW CONVERGENCE VALUE= .5193E-01 CRITERION= .1486 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 6 COMPLETED. CUM ITER = 917
 *** TIME = .162522E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5917E-05 OSCILLATION LIMIT = 46.68
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.10 CRITERION= .1565
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2856
 HT FLOW CONVERGENCE VALUE= .5183E-01 CRITERION= .1481 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 7 COMPLETED. CUM ITER = 918
 *** TIME = .163311E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5985E-05 OSCILLATION LIMIT = 47.22
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.82 CRITERION= .1559
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2837
 HT FLOW CONVERGENCE VALUE= .5153E-01 CRITERION= .1477 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 8 COMPLETED. CUM ITER = 919
 *** TIME = .164100E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5924E-05 OSCILLATION LIMIT = 46.74

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.08 CRITERION= .1556
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2859
 HT FLOW CONVERGENCE VALUE= .5148E-01 CRITERION= .1472 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 9 COMPLETED. CUM ITER = 920
 *** TIME = .164888E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5990E-05 OSCILLATION LIMIT = 47.26
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.80 CRITERION= .1551
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2840
 HT FLOW CONVERGENCE VALUE= .5115E-01 CRITERION= .1468 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 10 COMPLETED. CUM ITER = 921
 *** TIME = .165677E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5933E-05 OSCILLATION LIMIT = 46.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.06 CRITERION= .1547
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2861
 HT FLOW CONVERGENCE VALUE= .5105E-01 CRITERION= .1463 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 11 COMPLETED. CUM ITER = 922
 *** TIME = .166466E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5995E-05 OSCILLATION LIMIT = 47.30
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.78 CRITERION= .1542
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2843
 HT FLOW CONVERGENCE VALUE= .5077E-01 CRITERION= .1459 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 12 COMPLETED. CUM ITER = 923
 *** TIME = .167255E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5940E-05 OSCILLATION LIMIT = 46.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.04 CRITERION= .1538
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2864
 HT FLOW CONVERGENCE VALUE= .5086E-01 CRITERION= .1453 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 13 COMPLETED. CUM ITER = 924
 *** TIME = .168044E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6001E-05 OSCILLATION LIMIT = 47.34
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.76 CRITERION= .1533
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2846
 HT FLOW CONVERGENCE VALUE= .5063E-01 CRITERION= .1449 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 14 COMPLETED. CUM ITER = 925
 *** TIME = .168833E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5947E-05 OSCILLATION LIMIT = 46.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 49.02 CRITERION= .1530
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2867
 HT FLOW CONVERGENCE VALUE= .5052E-01 CRITERION= .1444 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 15 COMPLETED. CUM ITER = 926
 *** TIME = .169622E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6006E-05 OSCILLATION LIMIT = 47.38
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.74 CRITERION= .1524
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2850
 HT FLOW CONVERGENCE VALUE= .5031E-01 CRITERION= .1440 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 16 COMPLETED. CUM ITER = 927

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*** TIME = .170411E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5955E-05    OSCILLATION LIMIT = 46.98
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 49.00    CRITERION= .1521
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2869
    HT FLOW CONVERGENCE VALUE= .5027E-01    CRITERION= .1435    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 17 COMPLETED. CUM ITER = 928
*** TIME = .171200E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6012E-05    OSCILLATION LIMIT = 47.43
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.72    CRITERION= .1515
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2853
    HT FLOW CONVERGENCE VALUE= .4992E-01    CRITERION= .1431    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 18 COMPLETED. CUM ITER = 929
*** TIME = .171989E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5963E-05    OSCILLATION LIMIT = 47.04
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.98    CRITERION= .1512
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2872
    HT FLOW CONVERGENCE VALUE= .4989E-01    CRITERION= .1426    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 19 COMPLETED. CUM ITER = 930
*** TIME = .172778E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6016E-05    OSCILLATION LIMIT = 47.46
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.70    CRITERION= .1506
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2856
    HT FLOW CONVERGENCE VALUE= .4955E-01    CRITERION= .1422    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 20 COMPLETED. CUM ITER = 931
*** TIME = .173567E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5969E-05    OSCILLATION LIMIT = 47.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.96    CRITERION= .1503
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2874
    HT FLOW CONVERGENCE VALUE= .4948E-01    CRITERION= .1416    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 21 COMPLETED. CUM ITER = 932
*** TIME = .174356E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6021E-05    OSCILLATION LIMIT = 47.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.68    CRITERION= .1498
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2859
    HT FLOW CONVERGENCE VALUE= .4919E-01    CRITERION= .1412    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 22 COMPLETED. CUM ITER = 933
*** TIME = .175145E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5976E-05    OSCILLATION LIMIT = 47.15
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.94    CRITERION= .1494
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2877
    HT FLOW CONVERGENCE VALUE= .4897E-01    CRITERION= .1407    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 23 COMPLETED. CUM ITER = 934
*** TIME = .175934E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6026E-05    OSCILLATION LIMIT = 47.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 48.66    CRITERION= .1489
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2861
    HT FLOW CONVERGENCE VALUE= .4882E-01    CRITERION= .1403    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 24 COMPLETED. CUM ITER = 935
*** TIME = .176723E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5982E-05 OSCILLATION LIMIT = 47.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.92 CRITERION= .1486
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2879
HT FLOW CONVERGENCE VALUE= .4870E-01 CRITERION= .1398 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 25 COMPLETED. CUM ITER = 936
*** TIME = .177512E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6030E-05 OSCILLATION LIMIT = 47.57
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.64 CRITERION= .1480
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2864
HT FLOW CONVERGENCE VALUE= .4848E-01 CRITERION= .1394 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 26 COMPLETED. CUM ITER = 937
*** TIME = .178300E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5989E-05 OSCILLATION LIMIT = 47.25
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.90 CRITERION= .1477
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2881
HT FLOW CONVERGENCE VALUE= .4837E-01 CRITERION= .1389 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 27 COMPLETED. CUM ITER = 938
*** TIME = .179089E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6036E-05 OSCILLATION LIMIT = 47.62
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.62 CRITERION= .1471
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2867
HT FLOW CONVERGENCE VALUE= .4813E-01 CRITERION= .1385 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 28 COMPLETED. CUM ITER = 939
*** TIME = .179878E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5996E-05 OSCILLATION LIMIT = 47.31
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.88 CRITERION= .1468
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2884
HT FLOW CONVERGENCE VALUE= .4802E-01 CRITERION= .1379 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 29 COMPLETED. CUM ITER = 940
*** TIME = .180667E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6040E-05 OSCILLATION LIMIT = 47.65
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.61 CRITERION= .1462
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2870
HT FLOW CONVERGENCE VALUE= .4775E-01 CRITERION= .1375 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 30 COMPLETED. CUM ITER = 941
*** TIME = .181456E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6003E-05 OSCILLATION LIMIT = 47.36
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.86 CRITERION= .1459
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2886
HT FLOW CONVERGENCE VALUE= .4764E-01 CRITERION= .1370 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 31 COMPLETED. CUM ITER = 942
*** TIME = .182245E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6046E-05 OSCILLATION LIMIT = 47.70
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.59 CRITERION= .1454

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2873
 HT FLOW CONVERGENCE VALUE= .4733E-01 CRITERION= .1366 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 32 COMPLETED. CUM ITER = 943
 *** TIME = .183034E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6010E-05 OSCILLATION LIMIT = 47.42
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.84 CRITERION= .1450
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2889
 HT FLOW CONVERGENCE VALUE= .4737E-01 CRITERION= .1361 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 33 COMPLETED. CUM ITER = 944
 *** TIME = .183823E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6051E-05 OSCILLATION LIMIT = 47.74
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.57 CRITERION= .1445
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2876
 HT FLOW CONVERGENCE VALUE= .4711E-01 CRITERION= .1357 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 34 COMPLETED. CUM ITER = 945
 *** TIME = .184612E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6016E-05 OSCILLATION LIMIT = 47.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.82 CRITERION= .1442
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2891
 HT FLOW CONVERGENCE VALUE= .4702E-01 CRITERION= .1352 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 35 COMPLETED. CUM ITER = 946
 *** TIME = .185401E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6055E-05 OSCILLATION LIMIT = 47.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.55 CRITERION= .1436
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2879
 HT FLOW CONVERGENCE VALUE= .4675E-01 CRITERION= .1348 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 36 COMPLETED. CUM ITER = 947
 *** TIME = .186190E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6023E-05 OSCILLATION LIMIT = 47.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.81 CRITERION= .1433
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2894
 HT FLOW CONVERGENCE VALUE= .4682E-01 CRITERION= .1342 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 37 COMPLETED. CUM ITER = 948
 *** TIME = .186979E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6061E-05 OSCILLATION LIMIT = 47.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.53 CRITERION= .1427
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2882
 HT FLOW CONVERGENCE VALUE= .4680E-01 CRITERION= .1338 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 38 COMPLETED. CUM ITER = 949
 *** TIME = .187768E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6030E-05 OSCILLATION LIMIT = 47.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 48.79 CRITERION= .1424
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2896
 HT FLOW CONVERGENCE VALUE= .4684E-01 CRITERION= .1333 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 27 SUBSTEP 39 COMPLETED. CUM ITER = 950
 *** TIME = .188557E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .6066E-05 OSCILLATION LIMIT = 47.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 48.51      CRITERION= .1419
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2885
HT FLOW CONVERGENCE VALUE= .4661E-01 CRITERION= .1329    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 27 SUBSTEP 40 COMPLETED. CUM ITER = 951
*** TIME = .189346E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .6037E-05 OSCILLATION LIMIT = 47.63

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303      VERSION=HP 9000/7XX 11:27:20 JUN 18, 1995 CP= 51987.340
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 41.14      CRITERION= .1391
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2346
HT FLOW CONVERGENCE VALUE= .3862E-01 CRITERION= .1325    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 1 COMPLETED. CUM ITER = 952
*** TIME = .190135E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5603E-05 OSCILLATION LIMIT = 44.21
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 40.86      CRITERION= .1386
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2362
HT FLOW CONVERGENCE VALUE= .3857E-01 CRITERION= .1322    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 2 COMPLETED. CUM ITER = 953
*** TIME = .190923E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5672E-05 OSCILLATION LIMIT = 44.75
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 41.12      CRITERION= .1384
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2383
HT FLOW CONVERGENCE VALUE= .3871E-01 CRITERION= .1317    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 3 COMPLETED. CUM ITER = 954
*** TIME = .191712E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5755E-05 OSCILLATION LIMIT = 45.40
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 40.85      CRITERION= .1379
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2362
HT FLOW CONVERGENCE VALUE= .3849E-01 CRITERION= .1314    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 4 COMPLETED. CUM ITER = 955
*** TIME = .192501E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5675E-05 OSCILLATION LIMIT = 44.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 41.11      CRITERION= .1377
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2385
HT FLOW CONVERGENCE VALUE= .3855E-01 CRITERION= .1310    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 5 COMPLETED. CUM ITER = 956
*** TIME = .193290E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5759E-05 OSCILLATION LIMIT = 45.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

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HT FLOW CONVERGENCE VALUE= 40.84      CRITERION= .1372
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2365
HT FLOW CONVERGENCE VALUE= .3837E-01 CRITERION= .1307    <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 6 COMPLETED. CUM ITER = 957
*** TIME = .194079E+10 TIME INC = .788940E+07

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*** RESPONSE EIGENVALUE = .5682E-05 OSCILLATION LIMIT = 44.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.10 CRITERION= .1369
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2387
 HT FLOW CONVERGENCE VALUE= .3843E-01 CRITERION= .1302 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 7 COMPLETED. CUM ITER = 958
 *** TIME = .194868E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5763E-05 OSCILLATION LIMIT = 45.47
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.82 CRITERION= .1365
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2367
 HT FLOW CONVERGENCE VALUE= .3829E-01 CRITERION= .1299 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 8 COMPLETED. CUM ITER = 959
 *** TIME = .195657E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5690E-05 OSCILLATION LIMIT = 44.89
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.08 CRITERION= .1362
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2388
 HT FLOW CONVERGENCE VALUE= .3841E-01 CRITERION= .1295 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 9 COMPLETED. CUM ITER = 960
 *** TIME = .196446E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5768E-05 OSCILLATION LIMIT = 45.50
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.81 CRITERION= .1358
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2369
 HT FLOW CONVERGENCE VALUE= .3822E-01 CRITERION= .1292 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 10 COMPLETED. CUM ITER = 961
 *** TIME = .197235E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5697E-05 OSCILLATION LIMIT = 44.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.07 CRITERION= .1355
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2390
 HT FLOW CONVERGENCE VALUE= .3826E-01 CRITERION= .1287 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 11 COMPLETED. CUM ITER = 962
 *** TIME = .198024E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5772E-05 OSCILLATION LIMIT = 45.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.79 CRITERION= .1350
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2371
 HT FLOW CONVERGENCE VALUE= .3814E-01 CRITERION= .1284 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 12 COMPLETED. CUM ITER = 963
 *** TIME = .198813E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5704E-05 OSCILLATION LIMIT = 45.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.06 CRITERION= .1348
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2392
 HT FLOW CONVERGENCE VALUE= .3815E-01 CRITERION= .1280 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 13 COMPLETED. CUM ITER = 964
 *** TIME = .199602E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5776E-05 OSCILLATION LIMIT = 45.57
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.78 CRITERION= .1343
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2374
 HT FLOW CONVERGENCE VALUE= .3798E-01 CRITERION= .1277 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1


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*** LOAD STEP 28 SUBSTEP 14 COMPLETED. CUM ITER = 965
*** TIME = .200391E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5710E-05 OSCILLATION LIMIT = 45.05
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.04 CRITERION= .1341
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2393
HT FLOW CONVERGENCE VALUE= .3807E-01 CRITERION= .1272 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 15 COMPLETED. CUM ITER = 966
*** TIME = .201180E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5779E-05 OSCILLATION LIMIT = 45.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.77 CRITERION= .1336
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2376
HT FLOW CONVERGENCE VALUE= .3790E-01 CRITERION= .1269 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 16 COMPLETED. CUM ITER = 967
*** TIME = .201969E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5716E-05 OSCILLATION LIMIT = 45.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.03 CRITERION= .1334
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2395
HT FLOW CONVERGENCE VALUE= .3789E-01 CRITERION= .1265 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 17 COMPLETED. CUM ITER = 968
*** TIME = .202758E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5783E-05 OSCILLATION LIMIT = 45.62
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.75 CRITERION= .1329
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2378
HT FLOW CONVERGENCE VALUE= .3769E-01 CRITERION= .1262 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 18 COMPLETED. CUM ITER = 969
*** TIME = .203547E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5723E-05 OSCILLATION LIMIT = 45.15
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.01 CRITERION= .1326
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2396
HT FLOW CONVERGENCE VALUE= .3763E-01 CRITERION= .1257 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 19 COMPLETED. CUM ITER = 970
*** TIME = .204335E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5787E-05 OSCILLATION LIMIT = 45.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.74 CRITERION= .1322
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2380
HT FLOW CONVERGENCE VALUE= .3742E-01 CRITERION= .1254 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 20 COMPLETED. CUM ITER = 971
*** TIME = .205124E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5729E-05 OSCILLATION LIMIT = 45.20
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 41.00 CRITERION= .1319
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2398
HT FLOW CONVERGENCE VALUE= .3736E-01 CRITERION= .1250 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 21 COMPLETED. CUM ITER = 972
*** TIME = .205913E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5791E-05 OSCILLATION LIMIT = 45.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.73 CRITERION= .1315
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2382

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HT FLOW CONVERGENCE VALUE= .3716E-01 CRITERION= .1247 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 22 COMPLETED. CUM ITER = 973
 *** TIME = .206702E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5736E-05 OSCILLATION LIMIT = 45.25
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.99 CRITERION= .1312
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2400
 HT FLOW CONVERGENCE VALUE= .3713E-01 CRITERION= .1242 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 23 COMPLETED. CUM ITER = 974
 *** TIME = .207491E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5795E-05 OSCILLATION LIMIT = 45.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.71 CRITERION= .1307
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2384
 HT FLOW CONVERGENCE VALUE= .3700E-01 CRITERION= .1239 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 24 COMPLETED. CUM ITER = 975
 *** TIME = .208280E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5743E-05 OSCILLATION LIMIT = 45.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.97 CRITERION= .1305
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2401
 HT FLOW CONVERGENCE VALUE= .3684E-01 CRITERION= .1235 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 25 COMPLETED. CUM ITER = 976
 *** TIME = .209069E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5800E-05 OSCILLATION LIMIT = 45.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.70 CRITERION= .1300
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2387
 HT FLOW CONVERGENCE VALUE= .3664E-01 CRITERION= .1232 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 26 COMPLETED. CUM ITER = 977
 *** TIME = .209858E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5750E-05 OSCILLATION LIMIT = 45.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.96 CRITERION= .1298
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2403
 HT FLOW CONVERGENCE VALUE= .3670E-01 CRITERION= .1227 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 27 COMPLETED. CUM ITER = 978
 *** TIME = .210647E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5806E-05 OSCILLATION LIMIT = 45.80
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.68 CRITERION= .1293
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2389
 HT FLOW CONVERGENCE VALUE= .3650E-01 CRITERION= .1224 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 28 COMPLETED. CUM ITER = 979
 *** TIME = .211436E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5758E-05 OSCILLATION LIMIT = 45.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.95 CRITERION= .1291
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2405
 HT FLOW CONVERGENCE VALUE= .3640E-01 CRITERION= .1220 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 29 COMPLETED. CUM ITER = 980
 *** TIME = .212225E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5811E-05 OSCILLATION LIMIT = 45.85
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.67 CRITERION= .1286
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2391
 HT FLOW CONVERGENCE VALUE= .3622E-01 CRITERION= .1217 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 30 COMPLETED. CUM ITER = 981
 *** TIME = .213014E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5765E-05 OSCILLATION LIMIT = 45.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.93 CRITERION= .1283
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2407
 HT FLOW CONVERGENCE VALUE= .3620E-01 CRITERION= .1212 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 31 COMPLETED. CUM ITER = 982
 *** TIME = .213803E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5816E-05 OSCILLATION LIMIT = 45.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.66 CRITERION= .1279
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2394
 HT FLOW CONVERGENCE VALUE= .3642E-01 CRITERION= .1209 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 32 COMPLETED. CUM ITER = 983
 *** TIME = .214592E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5772E-05 OSCILLATION LIMIT = 45.54
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.92 CRITERION= .1276
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2409
 HT FLOW CONVERGENCE VALUE= .3640E-01 CRITERION= .1205 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 33 COMPLETED. CUM ITER = 984
 *** TIME = .215381E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5821E-05 OSCILLATION LIMIT = 45.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.64 CRITERION= .1272
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2396
 HT FLOW CONVERGENCE VALUE= .3621E-01 CRITERION= .1202 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 34 COMPLETED. CUM ITER = 985
 *** TIME = .216170E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5779E-05 OSCILLATION LIMIT = 45.60
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.90 CRITERION= .1269
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2411
 HT FLOW CONVERGENCE VALUE= .3667E-01 CRITERION= .1197 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 35 COMPLETED. CUM ITER = 986
 *** TIME = .216959E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5826E-05 OSCILLATION LIMIT = 45.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.63 CRITERION= .1265
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2398
 HT FLOW CONVERGENCE VALUE= .3682E-01 CRITERION= .1194 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 36 COMPLETED. CUM ITER = 987
 *** TIME = .217747E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5787E-05 OSCILLATION LIMIT = 45.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.89 CRITERION= .1262
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2413
 HT FLOW CONVERGENCE VALUE= .3669E-01 CRITERION= .1190 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 28 SUBSTEP 37 COMPLETED. CUM ITER = 988
 *** TIME = .218536E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5833E-05 OSCILLATION LIMIT = 46.02

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*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 40.62 CRITERION= .1257
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2401
HT FLOW CONVERGENCE VALUE= .3648E-01 CRITERION= .1187 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 38 COMPLETED. CUM ITER = 989
*** TIME = .219325E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5795E-05 OSCILLATION LIMIT = 45.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 40.88 CRITERION= .1255
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2415
HT FLOW CONVERGENCE VALUE= .3640E-01 CRITERION= .1182 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 39 COMPLETED. CUM ITER = 990
*** TIME = .220114E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5838E-05 OSCILLATION LIMIT = 46.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 40.60 CRITERION= .1250
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2403
HT FLOW CONVERGENCE VALUE= .3625E-01 CRITERION= .1179 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 28 SUBSTEP 40 COMPLETED. CUM ITER = 991
*** TIME = .220903E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5802E-05 OSCILLATION LIMIT = 45.77
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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 12:05:57 JUN 18, 1995 CP= 54219.350
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844
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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 39.35 CRITERION= .1243
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2089
HT FLOW CONVERGENCE VALUE= .3315E-01 CRITERION= .1176 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 1 COMPLETED. CUM ITER = 992
*** TIME = .221692E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4585E-05 OSCILLATION LIMIT = 36.17
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 39.07 CRITERION= .1239
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2089
HT FLOW CONVERGENCE VALUE= .3275E-01 CRITERION= .1173 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 2 COMPLETED. CUM ITER = 993
*** TIME = .222481E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4586E-05 OSCILLATION LIMIT = 36.18
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 39.33 CRITERION= .1237
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2106
HT FLOW CONVERGENCE VALUE= .3285E-01 CRITERION= .1170 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 3 COMPLETED. CUM ITER = 994
*** TIME = .223270E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4655E-05 OSCILLATION LIMIT = 36.72
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED
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HT FLOW CONVERGENCE VALUE= 39.06 CRITERION= .1233
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2090
HT FLOW CONVERGENCE VALUE= .3266E-01 CRITERION= .1167 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 4 COMPLETED. CUM ITER = 995
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*** TIME = .224059E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4591E-05    OSCILLATION LIMIT = 36.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.32    CRITERION= .1231
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2108
    HT FLOW CONVERGENCE VALUE= .3215E-01 CRITERION= .1164    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 5 COMPLETED. CUM ITER = 996
*** TIME = .224848E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4659E-05    OSCILLATION LIMIT = 36.76
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.05    CRITERION= .1227
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2092
    HT FLOW CONVERGENCE VALUE= .3154E-01 CRITERION= .1161    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 6 COMPLETED. CUM ITER = 997
*** TIME = .225637E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4599E-05    OSCILLATION LIMIT = 36.28
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.31    CRITERION= .1226
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2109
    HT FLOW CONVERGENCE VALUE= .3153E-01 CRITERION= .1157    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 7 COMPLETED. CUM ITER = 998
*** TIME = .226426E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4664E-05    OSCILLATION LIMIT = 36.80
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.03    CRITERION= .1222
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2094
    HT FLOW CONVERGENCE VALUE= .3139E-01 CRITERION= .1155    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 8 COMPLETED. CUM ITER = 999
*** TIME = .227215E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4605E-05    OSCILLATION LIMIT = 36.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.29    CRITERION= .1220
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2110
    HT FLOW CONVERGENCE VALUE= .3138E-01 CRITERION= .1151    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 9 COMPLETED. CUM ITER = 1000
*** TIME = .228004E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4668E-05    OSCILLATION LIMIT = 36.82
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.02    CRITERION= .1216
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2095
    HT FLOW CONVERGENCE VALUE= .3123E-01 CRITERION= .1149    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 10 COMPLETED. CUM ITER = 1001
*** TIME = .228793E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4611E-05    OSCILLATION LIMIT = 36.38
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.28    CRITERION= .1214
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2112
    HT FLOW CONVERGENCE VALUE= .3126E-01 CRITERION= .1145    <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 11 COMPLETED. CUM ITER = 1002
*** TIME = .229582E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4672E-05    OSCILLATION LIMIT = 36.86
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 39.01    CRITERION= .1210
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2097
    HT FLOW CONVERGENCE VALUE= .3097E-01 CRITERION= .1143    <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 12 COMPLETED. CUM ITER = 1003
*** TIME = .230370E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4618E-05 OSCILLATION LIMIT = 36.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.27 CRITERION= .1208
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2113
HT FLOW CONVERGENCE VALUE= .3056E-01 CRITERION= .1139 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 13 COMPLETED. CUM ITER = 1004
*** TIME = .231159E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4676E-05 OSCILLATION LIMIT = 36.89
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.99 CRITERION= .1204
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2099
HT FLOW CONVERGENCE VALUE= .3058E-01 CRITERION= .1137 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 14 COMPLETED. CUM ITER = 1005
*** TIME = .231948E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4626E-05 OSCILLATION LIMIT = 36.49
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.26 CRITERION= .1202
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2115
HT FLOW CONVERGENCE VALUE= .3057E-01 CRITERION= .1133 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 15 COMPLETED. CUM ITER = 1006
*** TIME = .232737E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4682E-05 OSCILLATION LIMIT = 36.94
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.98 CRITERION= .1198
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2101
HT FLOW CONVERGENCE VALUE= .3044E-01 CRITERION= .1131 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 16 COMPLETED. CUM ITER = 1007
*** TIME = .233526E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4632E-05 OSCILLATION LIMIT = 36.54
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.24 CRITERION= .1197
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2116
HT FLOW CONVERGENCE VALUE= .3041E-01 CRITERION= .1127 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 17 COMPLETED. CUM ITER = 1008
*** TIME = .234315E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4685E-05 OSCILLATION LIMIT = 36.96
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.97 CRITERION= .1193
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2103
HT FLOW CONVERGENCE VALUE= .3027E-01 CRITERION= .1125 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 18 COMPLETED. CUM ITER = 1009
*** TIME = .235104E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4638E-05 OSCILLATION LIMIT = 36.59
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.23 CRITERION= .1191
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2117
HT FLOW CONVERGENCE VALUE= .3026E-01 CRITERION= .1121 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 19 COMPLETED. CUM ITER = 1010
*** TIME = .235893E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4688E-05 OSCILLATION LIMIT = 36.99
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.96 CRITERION= .1187

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2104
 HT FLOW CONVERGENCE VALUE= .3013E-01 CRITERION= .1119 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 20 COMPLETED. CUM ITER = 1011
 *** TIME = .236682E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4643E-05 OSCILLATION LIMIT = 36.63
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.22 CRITERION= .1185
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2118
 HT FLOW CONVERGENCE VALUE= .3017E-01 CRITERION= .1115 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 21 COMPLETED. CUM ITER = 1012
 *** TIME = .237471E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4692E-05 OSCILLATION LIMIT = 37.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.94 CRITERION= .1181
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2106
 HT FLOW CONVERGENCE VALUE= .3003E-01 CRITERION= .1113 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 22 COMPLETED. CUM ITER = 1013
 *** TIME = .238260E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4650E-05 OSCILLATION LIMIT = 36.69
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.21 CRITERION= .1179
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2120
 HT FLOW CONVERGENCE VALUE= .3002E-01 CRITERION= .1109 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 23 COMPLETED. CUM ITER = 1014
 *** TIME = .239049E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4697E-05 OSCILLATION LIMIT = 37.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.93 CRITERION= .1175
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2108
 HT FLOW CONVERGENCE VALUE= .2989E-01 CRITERION= .1107 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 24 COMPLETED. CUM ITER = 1015
 *** TIME = .239838E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4656E-05 OSCILLATION LIMIT = 36.73
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.19 CRITERION= .1174
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2121
 HT FLOW CONVERGENCE VALUE= .2986E-01 CRITERION= .1103 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 25 COMPLETED. CUM ITER = 1016
 *** TIME = .240627E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4700E-05 OSCILLATION LIMIT = 37.08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.92 CRITERION= .1170
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2109
 HT FLOW CONVERGENCE VALUE= .2941E-01 CRITERION= .1100 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 26 COMPLETED. CUM ITER = 1017
 *** TIME = .241416E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4661E-05 OSCILLATION LIMIT = 36.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.18 CRITERION= .1168
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2122
 HT FLOW CONVERGENCE VALUE= .2918E-01 CRITERION= .1097 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 27 COMPLETED. CUM ITER = 1018
 *** TIME = .242205E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4705E-05 OSCILLATION LIMIT = 37.12
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.91 CRITERION= .1164
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2111
 HT FLOW CONVERGENCE VALUE= .2905E-01 CRITERION= .1094 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 28 COMPLETED. CUM ITER = 1019
 *** TIME = .242994E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4668E-05 OSCILLATION LIMIT = 36.83
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.17 CRITERION= .1162
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2124
 HT FLOW CONVERGENCE VALUE= .2806E-01 CRITERION= .1091 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 29 COMPLETED. CUM ITER = 1020
 *** TIME = .243782E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4709E-05 OSCILLATION LIMIT = 37.15
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.89 CRITERION= .1158
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2113
 HT FLOW CONVERGENCE VALUE= .2783E-01 CRITERION= .1088 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 30 COMPLETED. CUM ITER = 1021
 *** TIME = .244571E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4674E-05 OSCILLATION LIMIT = 36.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.15 CRITERION= .1156
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2125
 HT FLOW CONVERGENCE VALUE= .2763E-01 CRITERION= .1085 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 31 COMPLETED. CUM ITER = 1022
 *** TIME = .245360E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4714E-05 OSCILLATION LIMIT = 37.19
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.88 CRITERION= .1152
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2115
 HT FLOW CONVERGENCE VALUE= .2747E-01 CRITERION= .1082 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 32 COMPLETED. CUM ITER = 1023
 *** TIME = .246149E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4681E-05 OSCILLATION LIMIT = 36.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.14 CRITERION= .1150
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2127
 HT FLOW CONVERGENCE VALUE= .2729E-01 CRITERION= .1078 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 33 COMPLETED. CUM ITER = 1024
 *** TIME = .246938E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4718E-05 OSCILLATION LIMIT = 37.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.87 CRITERION= .1146
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2116
 HT FLOW CONVERGENCE VALUE= .2673E-01 CRITERION= .1076 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 34 COMPLETED. CUM ITER = 1025
 *** TIME = .247727E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4687E-05 OSCILLATION LIMIT = 36.97
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.13 CRITERION= .1145
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2128
 HT FLOW CONVERGENCE VALUE= .2623E-01 CRITERION= .1072 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 29 SUBSTEP 35 COMPLETED. CUM ITER = 1026
 *** TIME = .248516E+10 TIME INC = .788940E+07


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*** RESPONSE EIGENVALUE = .4723E-05 OSCILLATION LIMIT = 37.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.85 CRITERION= .1141
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2118
HT FLOW CONVERGENCE VALUE= .2605E-01 CRITERION= .1070 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 36 COMPLETED. CUM ITER = 1027
*** TIME = .249305E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4693E-05 OSCILLATION LIMIT = 37.03
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.12 CRITERION= .1139
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2129
HT FLOW CONVERGENCE VALUE= .2603E-01 CRITERION= .1066 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 37 COMPLETED. CUM ITER = 1028
*** TIME = .250094E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4727E-05 OSCILLATION LIMIT = 37.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.84 CRITERION= .1135
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2120
HT FLOW CONVERGENCE VALUE= .2591E-01 CRITERION= .1064 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 38 COMPLETED. CUM ITER = 1029
*** TIME = .250883E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4699E-05 OSCILLATION LIMIT = 37.07
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 39.10 CRITERION= .1133
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2131
HT FLOW CONVERGENCE VALUE= .2577E-01 CRITERION= .1060 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 39 COMPLETED. CUM ITER = 1030
*** TIME = .251672E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4732E-05 OSCILLATION LIMIT = 37.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 38.83 CRITERION= .1129
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.2122
HT FLOW CONVERGENCE VALUE= .2555E-01 CRITERION= .1058 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 29 SUBSTEP 40 COMPLETED. CUM ITER = 1031
*** TIME = .252461E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4705E-05 OSCILLATION LIMIT = 37.12

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***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 12:45:42 JUN 18, 1995 CP= 56471.400
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

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44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

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HT FLOW CONVERGENCE VALUE= 30.48 CRITERION= .1101
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1638
HT FLOW CONVERGENCE VALUE= .1981E-01 CRITERION= .1055 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 1 COMPLETED. CUM ITER = 1032
*** TIME = .253250E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4627E-05 OSCILLATION LIMIT = 36.50
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.21 CRITERION= .1097
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1650
HT FLOW CONVERGENCE VALUE= .1979E-01 CRITERION= .1053 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

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*** LOAD STEP 30 SUBSTEP 2 COMPLETED. CUM ITER = 1033
 *** TIME = .254039E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4695E-05 OSCILLATION LIMIT = 37.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.47 CRITERION= .1096
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1668
 HT FLOW CONVERGENCE VALUE= .1984E-01 CRITERION= .1050 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 3 COMPLETED. CUM ITER = 1034
 *** TIME = .254828E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4788E-05 OSCILLATION LIMIT = 37.77
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.20 CRITERION= .1093
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1650
 HT FLOW CONVERGENCE VALUE= .1968E-01 CRITERION= .1048 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 4 COMPLETED. CUM ITER = 1035
 *** TIME = .255617E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4696E-05 OSCILLATION LIMIT = 37.05
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.46 CRITERION= .1092
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1668
 HT FLOW CONVERGENCE VALUE= .1973E-01 CRITERION= .1045 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 5 COMPLETED. CUM ITER = 1036
 *** TIME = .256406E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4790E-05 OSCILLATION LIMIT = 37.79
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.19 CRITERION= .1088
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1651
 HT FLOW CONVERGENCE VALUE= .1956E-01 CRITERION= .1044 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 6 COMPLETED. CUM ITER = 1037
 *** TIME = .257194E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4702E-05 OSCILLATION LIMIT = 37.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.45 CRITERION= .1087
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1669
 HT FLOW CONVERGENCE VALUE= .1959E-01 CRITERION= .1041 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 7 COMPLETED. CUM ITER = 1038
 *** TIME = .257983E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4792E-05 OSCILLATION LIMIT = 37.81
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.18 CRITERION= .1084
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1652
 HT FLOW CONVERGENCE VALUE= .1945E-01 CRITERION= .1039 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 8 COMPLETED. CUM ITER = 1039
 *** TIME = .258772E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4708E-05 OSCILLATION LIMIT = 37.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.45 CRITERION= .1082
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1670
 HT FLOW CONVERGENCE VALUE= .1948E-01 CRITERION= .1036 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1

*** LOAD STEP 30 SUBSTEP 9 COMPLETED. CUM ITER = 1040
 *** TIME = .259561E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4794E-05 OSCILLATION LIMIT = 37.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .1079
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1654

HT FLOW CONVERGENCE VALUE= .1935E-01 CRITERION= .1034 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 10 COMPLETED. CUM ITER = 1041
 *** TIME = .260350E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4713E-05 OSCILLATION LIMIT = 37.18
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.44 CRITERION= .1078
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1670
 HT FLOW CONVERGENCE VALUE= .1940E-01 CRITERION= .1031 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 11 COMPLETED. CUM ITER = 1042
 *** TIME = .261139E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4796E-05 OSCILLATION LIMIT = 37.84
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.17 CRITERION= .1074
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1655
 HT FLOW CONVERGENCE VALUE= .1927E-01 CRITERION= .1029 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 12 COMPLETED. CUM ITER = 1043
 *** TIME = .261928E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4719E-05 OSCILLATION LIMIT = 37.23
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.43 CRITERION= .1073
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1671
 HT FLOW CONVERGENCE VALUE= .1932E-01 CRITERION= .1026 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 13 COMPLETED. CUM ITER = 1044
 *** TIME = .262717E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4799E-05 OSCILLATION LIMIT = 37.86
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.16 CRITERION= .1070
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1656
 HT FLOW CONVERGENCE VALUE= .1920E-01 CRITERION= .1025 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 14 COMPLETED. CUM ITER = 1045
 *** TIME = .263506E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4724E-05 OSCILLATION LIMIT = 37.27
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.42 CRITERION= .1069
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1672
 HT FLOW CONVERGENCE VALUE= .1923E-01 CRITERION= .1022 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 15 COMPLETED. CUM ITER = 1046
 *** TIME = .264295E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4801E-05 OSCILLATION LIMIT = 37.88
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.15 CRITERION= .1065
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1657
 HT FLOW CONVERGENCE VALUE= .1911E-01 CRITERION= .1020 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 16 COMPLETED. CUM ITER = 1047
 *** TIME = .265084E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4730E-05 OSCILLATION LIMIT = 37.31
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.41 CRITERION= .1064
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1673
 HT FLOW CONVERGENCE VALUE= .1915E-01 CRITERION= .1017 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 17 COMPLETED. CUM ITER = 1048
 *** TIME = .265873E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4803E-05 OSCILLATION LIMIT = 37.90
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.14 CRITERION= .1061
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1659
 HT FLOW CONVERGENCE VALUE= .1904E-01 CRITERION= .1015 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 18 COMPLETED. CUM ITER = 1049
 *** TIME = .266662E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4735E-05 OSCILLATION LIMIT = 37.36
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.41 CRITERION= .1059
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1674
 HT FLOW CONVERGENCE VALUE= .1907E-01 CRITERION= .1012 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 19 COMPLETED. CUM ITER = 1050
 *** TIME = .267451E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4806E-05 OSCILLATION LIMIT = 37.92
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.14 CRITERION= .1056
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1660
 HT FLOW CONVERGENCE VALUE= .1895E-01 CRITERION= .1010 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 20 COMPLETED. CUM ITER = 1051
 *** TIME = .268240E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4740E-05 OSCILLATION LIMIT = 37.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.40 CRITERION= .1055
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1674
 HT FLOW CONVERGENCE VALUE= .1897E-01 CRITERION= .1007 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 21 COMPLETED. CUM ITER = 1052
 *** TIME = .269029E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4808E-05 OSCILLATION LIMIT = 37.93
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.13 CRITERION= .1052
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1661
 HT FLOW CONVERGENCE VALUE= .1885E-01 CRITERION= .1006 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 22 COMPLETED. CUM ITER = 1053
 *** TIME = .269817E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4746E-05 OSCILLATION LIMIT = 37.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.39 CRITERION= .1050
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1675
 HT FLOW CONVERGENCE VALUE= .1888E-01 CRITERION= .1003 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 23 COMPLETED. CUM ITER = 1054
 *** TIME = .270606E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4811E-05 OSCILLATION LIMIT = 37.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.12 CRITERION= .1047
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1663
 HT FLOW CONVERGENCE VALUE= .1876E-01 CRITERION= .1001 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 24 COMPLETED. CUM ITER = 1055
 *** TIME = .271395E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4751E-05 OSCILLATION LIMIT = 37.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.38 CRITERION= .1046
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1676
 HT FLOW CONVERGENCE VALUE= .1879E-01 CRITERION= .9979E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 25 COMPLETED. CUM ITER = 1056
 *** TIME = .272184E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4813E-05 OSCILLATION LIMIT = 37.97

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.11 CRITERION= .1042
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1664
 HT FLOW CONVERGENCE VALUE= .1868E-01 CRITERION= .9962E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 26 COMPLETED. CUM ITER = 1057
 *** TIME = .272973E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4756E-05 OSCILLATION LIMIT = 37.52
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.38 CRITERION= .1041
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1677
 HT FLOW CONVERGENCE VALUE= .1871E-01 CRITERION= .9931E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 27 COMPLETED. CUM ITER = 1058
 *** TIME = .273762E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4816E-05 OSCILLATION LIMIT = 38.00
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.10 CRITERION= .1038
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1665
 HT FLOW CONVERGENCE VALUE= .1861E-01 CRITERION= .9914E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 28 COMPLETED. CUM ITER = 1059
 *** TIME = .274551E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4761E-05 OSCILLATION LIMIT = 37.56
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.37 CRITERION= .1037
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1678
 HT FLOW CONVERGENCE VALUE= .1864E-01 CRITERION= .9884E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 29 COMPLETED. CUM ITER = 1060
 *** TIME = .275340E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4819E-05 OSCILLATION LIMIT = 38.02
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.10 CRITERION= .1033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1667
 HT FLOW CONVERGENCE VALUE= .1854E-01 CRITERION= .9867E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 30 COMPLETED. CUM ITER = 1061
 *** TIME = .276129E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4767E-05 OSCILLATION LIMIT = 37.61
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.36 CRITERION= .1032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1679
 HT FLOW CONVERGENCE VALUE= .1856E-01 CRITERION= .9836E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 31 COMPLETED. CUM ITER = 1062
 *** TIME = .276918E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4822E-05 OSCILLATION LIMIT = 38.04
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.09 CRITERION= .1029
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1668
 HT FLOW CONVERGENCE VALUE= .1846E-01 CRITERION= .9819E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 32 COMPLETED. CUM ITER = 1063
 *** TIME = .277707E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .4772E-05 OSCILLATION LIMIT = 37.65
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 30.35 CRITERION= .1027
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1680
 HT FLOW CONVERGENCE VALUE= .1849E-01 CRITERION= .9788E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 30 SUBSTEP 33 COMPLETED. CUM ITER = 1064

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*** TIME = .278496E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4824E-05    OSCILLATION LIMIT = 38.06
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.08    CRITERION= .1024
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1669
    HT FLOW CONVERGENCE VALUE= .1839E-01 CRITERION= .9771E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 34 COMPLETED. CUM ITER = 1065
*** TIME = .279285E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4777E-05    OSCILLATION LIMIT = 37.69
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.35    CRITERION= .1023
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1681
    HT FLOW CONVERGENCE VALUE= .1841E-01 CRITERION= .9741E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 35 COMPLETED. CUM ITER = 1066
*** TIME = .280074E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4827E-05    OSCILLATION LIMIT = 38.08
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.07    CRITERION= .1020
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1671
    HT FLOW CONVERGENCE VALUE= .1832E-01 CRITERION= .9724E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 36 COMPLETED. CUM ITER = 1067
*** TIME = .280863E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4782E-05    OSCILLATION LIMIT = 37.73
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.34    CRITERION= .1018
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1682
    HT FLOW CONVERGENCE VALUE= .1833E-01 CRITERION= .9693E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 37 COMPLETED. CUM ITER = 1068
*** TIME = .281652E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4830E-05    OSCILLATION LIMIT = 38.10
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.07    CRITERION= .1015
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1672
    HT FLOW CONVERGENCE VALUE= .1824E-01 CRITERION= .9676E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 38 COMPLETED. CUM ITER = 1069
*** TIME = .282441E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4787E-05    OSCILLATION LIMIT = 37.77
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.33    CRITERION= .1014
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1683
    HT FLOW CONVERGENCE VALUE= .1826E-01 CRITERION= .9646E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 39 COMPLETED. CUM ITER = 1070
*** TIME = .283229E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4833E-05    OSCILLATION LIMIT = 38.13
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07    UNCHANGED

    HT FLOW CONVERGENCE VALUE= 30.06    CRITERION= .1010
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1673
    HT FLOW CONVERGENCE VALUE= .1817E-01 CRITERION= .9629E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 30 SUBSTEP 40 COMPLETED. CUM ITER = 1071
*** TIME = .284018E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .4792E-05    OSCILLATION LIMIT = 37.80
    Apply loads and solve for 100 to 1000 years

*DO LOOP ON PARAMETER= TM    FROM .31558E+10 TO .31558E+11 BY .31558E+10
TIME= .31558E+10

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SELECT FOR ITEM=MAT COMPONENT=
IN RANGE 14 TO 14 STEP 1

22 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

SELECT ELEMENTS CREATED FROM SELECTED AREAS.

1408 ELEMENTS (OF 4573 DEFINED) SELECTED FROM
22 SELECTED AREAS BY ESLA COMMAND.

SPECIFIED BODY FORCE HGEN FOR ALL SELECTED ELEMENTS AT STARTING LOCATION 1
1418.23550 .000000000E+00 .000000000E+00 .000000000E+00

ALL SELECT FOR ITEM=AREA COMPONENT=
IN RANGE 1 TO 160 STEP 1

160 AREAS (OF 160 DEFINED) SELECTED BY ASEL COMMAND.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

CONSTRAINT AT KEYPOINT 11
LOAD LABELS = TEMP
VALUES = 106.00 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 10
LOAD LABELS = TEMP
VALUES = 106.33 .00000E+00 EXPANSION KEY = 1

CONSTRAINT AT KEYPOINT 9
LOAD LABELS = TEMP
VALUES = 107.14 .00000E+00 EXPANSION KEY = 1

***** ANSYS SOLVE COMMAND *****

TRANSFER SOLID MODEL BOUNDARY CONDITIONS TO FINITE ELEMENT MODEL
CONSTRAINTS TRANSFERRED FROM KEYPOINTS = 121

*** NOTE *** CP= 58715.670 TIME= 13:24:48
Nonlinear analysis, NROPT set to 1 (full Newton-Raphson solution
procedure) for ALL DOFs.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 13:24:48 JUN 18, 1995 CP= 58715.670
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

LOAD STEP OPTIONS

LOAD STEP NUMBER. 31
TIME AT END OF THE LOAD STEP.31558E+10
AUTOMATIC TIME STEPPING ON
INITIAL NUMBER OF SUBSTEPS 10
MAXIMUM NUMBER OF SUBSTEPS 40
MINIMUM NUMBER OF SUBSTEPS 5
START WITH TIME STEP FROM PREVIOUS SUBSTEP . YES
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . 25
STEP CHANGE BOUNDARY CONDITIONS NO
TRANSIENT (INERTIA) EFFECTS
THERMAL DOFS ON
TRANSIENT INTEGRATION PARAMETERS
THETA.50000
OSCILLATION LIMIT CRITERION.50000
TOLERANCE.20000

TERMINATE ANALYSIS IF NOT CONVERGEDYES (EXIT)
 CONVERGENCE CONTROLS.USE DEFAULTS
 PRINT OUTPUT CONTROLSNO PRINTOUT
 DATABASE OUTPUT CONTROLS.ALL DATA WRITTEN
 FOR THE LAST SUBSTEP

HT FLOW CONVERGENCE VALUE= 25.19 CRITERION= .9950E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1449
 HT FLOW CONVERGENCE VALUE= .1540E-01 CRITERION= .9601E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 1 COMPLETED. CUM ITER = 1072
 *** TIME = .284807E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5280E-05 OSCILLATION LIMIT = 41.66
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.92 CRITERION= .9920E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1449
 HT FLOW CONVERGENCE VALUE= .1536E-01 CRITERION= .9586E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 2 COMPLETED. CUM ITER = 1073
 *** TIME = .285596E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5293E-05 OSCILLATION LIMIT = 41.76
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.19 CRITERION= .9909E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
 HT FLOW CONVERGENCE VALUE= .1541E-01 CRITERION= .9558E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 3 COMPLETED. CUM ITER = 1074
 *** TIME = .286385E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5374E-05 OSCILLATION LIMIT = 42.40
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.92 CRITERION= .9878E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1449
 HT FLOW CONVERGENCE VALUE= .1530E-01 CRITERION= .9543E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 4 COMPLETED. CUM ITER = 1075
 *** TIME = .287174E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5296E-05 OSCILLATION LIMIT = 41.78
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.18 CRITERION= .9867E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
 HT FLOW CONVERGENCE VALUE= .1535E-01 CRITERION= .9515E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 5 COMPLETED. CUM ITER = 1076
 *** TIME = .287963E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5376E-05 OSCILLATION LIMIT = 42.41
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.91 CRITERION= .9837E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1450
 HT FLOW CONVERGENCE VALUE= .1525E-01 CRITERION= .9501E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 6 COMPLETED. CUM ITER = 1077
 *** TIME = .288752E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5301E-05 OSCILLATION LIMIT = 41.82
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.18 CRITERION= .9826E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
 HT FLOW CONVERGENCE VALUE= .1529E-01 CRITERION= .9473E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 7 COMPLETED. CUM ITER = 1078
 *** TIME = .289541E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5378E-05 OSCILLATION LIMIT = 42.43
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.91 CRITERION= .9795E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1451
 HT FLOW CONVERGENCE VALUE= .1519E-01 CRITERION= .9458E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 8 COMPLETED. CUM ITER = 1079
 *** TIME = .290330E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5306E-05 OSCILLATION LIMIT = 41.87
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.17 CRITERION= .9785E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
 HT FLOW CONVERGENCE VALUE= .1523E-01 CRITERION= .9430E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 9 COMPLETED. CUM ITER = 1080
 *** TIME = .291119E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5380E-05 OSCILLATION LIMIT = 42.44
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.90 CRITERION= .9754E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1452
 HT FLOW CONVERGENCE VALUE= .1514E-01 CRITERION= .9415E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 10 COMPLETED. CUM ITER = 1081
 *** TIME = .291908E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5312E-05 OSCILLATION LIMIT = 41.91
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.17 CRITERION= .9743E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
 HT FLOW CONVERGENCE VALUE= .1517E-01 CRITERION= .9387E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 11 COMPLETED. CUM ITER = 1082
 *** TIME = .292697E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5382E-05 OSCILLATION LIMIT = 42.46
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.90 CRITERION= .9712E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1453
 HT FLOW CONVERGENCE VALUE= .1508E-01 CRITERION= .9373E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 12 COMPLETED. CUM ITER = 1083
 *** TIME = .293486E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5317E-05 OSCILLATION LIMIT = 41.95
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.16 CRITERION= .9702E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1511E-01 CRITERION= .9344E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 13 COMPLETED. CUM ITER = 1084
 *** TIME = .294275E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5384E-05 OSCILLATION LIMIT = 42.48
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.89 CRITERION= .9671E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1454
 HT FLOW CONVERGENCE VALUE= .1502E-01 CRITERION= .9330E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 14 COMPLETED. CUM ITER = 1085
 *** TIME = .295064E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5322E-05 OSCILLATION LIMIT = 41.99
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.16 CRITERION= .9660E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1505E-01 CRITERION= .9302E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 15 COMPLETED. CUM ITER = 1086
 *** TIME = .295853E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5386E-05 OSCILLATION LIMIT = 42.49

*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.89 CRITERION= .9630E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1455
 HT FLOW CONVERGENCE VALUE= .1496E-01 CRITERION= .9287E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 16 COMPLETED. CUM ITER = 1087
 *** TIME = .296641E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5327E-05 OSCILLATION LIMIT = 42.03
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.15 CRITERION= .9619E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1500E-01 CRITERION= .9259E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 17 COMPLETED. CUM ITER = 1088
 *** TIME = .297430E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5388E-05 OSCILLATION LIMIT = 42.51
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.88 CRITERION= .9588E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1456
 HT FLOW CONVERGENCE VALUE= .1491E-01 CRITERION= .9245E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 18 COMPLETED. CUM ITER = 1089
 *** TIME = .298219E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5332E-05 OSCILLATION LIMIT = 42.06
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.15 CRITERION= .9578E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1467
 HT FLOW CONVERGENCE VALUE= .1494E-01 CRITERION= .9216E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 19 COMPLETED. CUM ITER = 1090
 *** TIME = .299008E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5390E-05 OSCILLATION LIMIT = 42.53
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.87 CRITERION= .9547E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1457
 HT FLOW CONVERGENCE VALUE= .1485E-01 CRITERION= .9202E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 20 COMPLETED. CUM ITER = 1091
 *** TIME = .299797E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5337E-05 OSCILLATION LIMIT = 42.10
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.14 CRITERION= .9536E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1488E-01 CRITERION= .9174E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 21 COMPLETED. CUM ITER = 1092
 *** TIME = .300586E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5393E-05 OSCILLATION LIMIT = 42.55
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.87 CRITERION= .9506E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1458
 HT FLOW CONVERGENCE VALUE= .1480E-01 CRITERION= .9159E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 22 COMPLETED. CUM ITER = 1093
 *** TIME = .301375E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5342E-05 OSCILLATION LIMIT = 42.14
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.13 CRITERION= .9495E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1468
 HT FLOW CONVERGENCE VALUE= .1482E-01 CRITERION= .9131E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 23 COMPLETED. CUM ITER = 1094

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*** TIME = .302164E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5395E-05    OSCILLATION LIMIT = 42.56
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.86    CRITERION= .9464E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1459
    HT FLOW CONVERGENCE VALUE= .1474E-01 CRITERION= .9116E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 24 COMPLETED. CUM ITER = 1095
*** TIME = .302953E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5347E-05    OSCILLATION LIMIT = 42.18
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.13    CRITERION= .9454E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1469
    HT FLOW CONVERGENCE VALUE= .1476E-01 CRITERION= .9088E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 25 COMPLETED. CUM ITER = 1096
*** TIME = .303742E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5397E-05    OSCILLATION LIMIT = 42.58
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.86    CRITERION= .9423E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1459
    HT FLOW CONVERGENCE VALUE= .1469E-01 CRITERION= .9074E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 26 COMPLETED. CUM ITER = 1097
*** TIME = .304531E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5352E-05    OSCILLATION LIMIT = 42.22
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.12    CRITERION= .9412E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1469
    HT FLOW CONVERGENCE VALUE= .1472E-01 CRITERION= .9045E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 27 COMPLETED. CUM ITER = 1098
*** TIME = .305320E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5400E-05    OSCILLATION LIMIT = 42.60
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.85    CRITERION= .9381E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1460
    HT FLOW CONVERGENCE VALUE= .1464E-01 CRITERION= .9031E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 28 COMPLETED. CUM ITER = 1099
*** TIME = .306109E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5356E-05    OSCILLATION LIMIT = 42.26
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.12    CRITERION= .9371E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1470
    HT FLOW CONVERGENCE VALUE= .1466E-01 CRITERION= .9003E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 29 COMPLETED. CUM ITER = 1100
*** TIME = .306898E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5402E-05    OSCILLATION LIMIT = 42.62
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 24.85    CRITERION= .9340E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1461
    HT FLOW CONVERGENCE VALUE= .1459E-01 CRITERION= .8988E-01 <<< CONVERGED
    >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 30 COMPLETED. CUM ITER = 1101
*** TIME = .307687E+10    TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5361E-05    OSCILLATION LIMIT = 42.30
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

    HT FLOW CONVERGENCE VALUE= 25.11    CRITERION= .9330E-01
    EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1471
    HT FLOW CONVERGENCE VALUE= .1461E-01 CRITERION= .8960E-01 <<< CONVERGED

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>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 31 COMPLETED. CUM ITER = 1102
*** TIME = .308476E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5405E-05 OSCILLATION LIMIT = 42.64
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.84 CRITERION= .9299E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1462
HT FLOW CONVERGENCE VALUE= .1454E-01 CRITERION= .8945E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 32 COMPLETED. CUM ITER = 1103
*** TIME = .309264E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5366E-05 OSCILLATION LIMIT = 42.33
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.11 CRITERION= .9288E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1471
HT FLOW CONVERGENCE VALUE= .1456E-01 CRITERION= .8917E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 33 COMPLETED. CUM ITER = 1104
*** TIME = .310053E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5407E-05 OSCILLATION LIMIT = 42.66
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.84 CRITERION= .9257E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1463
HT FLOW CONVERGENCE VALUE= .1449E-01 CRITERION= .8903E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 34 COMPLETED. CUM ITER = 1105
*** TIME = .310842E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5371E-05 OSCILLATION LIMIT = 42.37
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.10 CRITERION= .9247E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1472
HT FLOW CONVERGENCE VALUE= .1451E-01 CRITERION= .8874E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 35 COMPLETED. CUM ITER = 1106
*** TIME = .311631E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5410E-05 OSCILLATION LIMIT = 42.68
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.83 CRITERION= .9216E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1464
HT FLOW CONVERGENCE VALUE= .1444E-01 CRITERION= .8860E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 36 COMPLETED. CUM ITER = 1107
*** TIME = .312420E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5375E-05 OSCILLATION LIMIT = 42.41
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.10 CRITERION= .9206E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1473
HT FLOW CONVERGENCE VALUE= .1446E-01 CRITERION= .8832E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 37 COMPLETED. CUM ITER = 1108
*** TIME = .313209E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5412E-05 OSCILLATION LIMIT = 42.70
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.83 CRITERION= .9175E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1465
HT FLOW CONVERGENCE VALUE= .1440E-01 CRITERION= .8817E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 31 SUBSTEP 38 COMPLETED. CUM ITER = 1109
*** TIME = .313998E+10 TIME INC = .788940E+07
*** RESPONSE EIGENVALUE = .5380E-05 OSCILLATION LIMIT = 42.44
*** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 25.09 CRITERION= .9164E-01

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EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1473
 HT FLOW CONVERGENCE VALUE= .1441E-01 CRITERION= .8789E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 39 COMPLETED. CUM ITER = 1110
 *** TIME = .314787E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5415E-05 OSCILLATION LIMIT = 42.72
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+07 UNCHANGED

HT FLOW CONVERGENCE VALUE= 24.82 CRITERION= .9133E-01
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.1466
 HT FLOW CONVERGENCE VALUE= .1435E-01 CRITERION= .8774E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 31 SUBSTEP 40 COMPLETED. CUM ITER = 1111
 *** TIME = .315576E+10 TIME INC = .788940E+07
 *** RESPONSE EIGENVALUE = .5384E-05 OSCILLATION LIMIT = 42.48

*ENDDO INDEX= TM

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:03:45 JUN 18, 1995 CP= 60955.860
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr. old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 129.4 CRITERION= .1563
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7158
 HT FLOW CONVERGENCE VALUE= .7076E-01 CRITERION= .8671E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 1 COMPLETED. CUM ITER = 1112
 *** TIME = .323465E+10 TIME INC = .788940E+08
 *** AUTO STEP TIME: NEXT TIME INC = .78894E+08 UNCHANGED

HT FLOW CONVERGENCE VALUE= 129.1 CRITERION= .1555
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.6854
 HT FLOW CONVERGENCE VALUE= .6911E-01 CRITERION= .8586E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 32 SUBSTEP 2 COMPLETED. CUM ITER = 1113
 *** TIME = .331355E+10 TIME INC = .788940E+08
 *** AUTO TIME STEP: NEXT TIME INC = .23668E+09 INCREASED (FACTOR = 3.0000)

HT FLOW CONVERGENCE VALUE= 387.6 CRITERION= .3969
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.136
 HT FLOW CONVERGENCE VALUE= .2021 CRITERION= .8293E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1060
 HT FLOW CONVERGENCE VALUE= .4528E-02 CRITERION= .8307E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 3 COMPLETED. CUM ITER = 1115
 *** TIME = .355023E+10 TIME INC = .236682E+09
 *** AUTO STEP TIME: NEXT TIME INC = .23668E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 386.7 CRITERION= .3955
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.176
 HT FLOW CONVERGENCE VALUE= .1975 CRITERION= .8023E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1042
 HT FLOW CONVERGENCE VALUE= .4284E-02 CRITERION= .8037E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 32 SUBSTEP 4 COMPLETED. CUM ITER = 1117
 *** TIME = .378691E+10 TIME INC = .236682E+09
 *** AUTO TIME STEP: NEXT TIME INC = .63115E+09 INCREASED (FACTOR = 2.6667)

HT FLOW CONVERGENCE VALUE= 1030. CRITERION= 1.033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.815
 HT FLOW CONVERGENCE VALUE= .4685 CRITERION= .7257E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2532
 HT FLOW CONVERGENCE VALUE= .9300E-02 CRITERION= .7289E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 32 SUBSTEP 5 COMPLETED. CUM ITER = 1119
 *** TIME = .441806E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1025. CRITERION= 1.028
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.850
 HT FLOW CONVERGENCE VALUE= .4201 CRITERION= .6540E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2312
 HT FLOW CONVERGENCE VALUE= .7578E-02 CRITERION= .6554E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 32 SUBSTEP 6 COMPLETED. CUM ITER = 1121
 *** TIME = .504922E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1024. CRITERION= 1.026
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.885
 HT FLOW CONVERGENCE VALUE= .4147 CRITERION= .5801E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2069
 HT FLOW CONVERGENCE VALUE= .5890E-02 CRITERION= .5802E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 32 SUBSTEP 7 COMPLETED. CUM ITER = 1123
 *** TIME = .568037E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 1023. CRITERION= 1.025
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -5.917
 HT FLOW CONVERGENCE VALUE= .3465 CRITERION= .5061E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1847
 HT FLOW CONVERGENCE VALUE= .4635E-02 CRITERION= .5062E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 32 SUBSTEP 8 COMPLETED. CUM ITER = 1125
 *** TIME = .631152E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:16:31 JUN 18, 1995 CP= 61574.810
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 413.4 CRITERION= .4164
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.161
 HT FLOW CONVERGENCE VALUE= .1350 CRITERION= .4808E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6865E-01
 HT FLOW CONVERGENCE VALUE= .1750E-02 CRITERION= .4809E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 33 SUBSTEP 1 COMPLETED. CUM ITER = 1127
 *** TIME = .694267E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 413.2 CRITERION= .4160
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.160
 HT FLOW CONVERGENCE VALUE= .1206 CRITERION= .4569E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6540E-01
 HT FLOW CONVERGENCE VALUE= .1562E-02 CRITERION= .4570E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 33 SUBSTEP 2 COMPLETED. CUM ITER = 1129
 *** TIME = .757382E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 413.5 CRITERION= .4159
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.168
 HT FLOW CONVERGENCE VALUE= .1166 CRITERION= .4316E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .6183E-01
 HT FLOW CONVERGENCE VALUE= .1349E-02 CRITERION= .4316E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2

*** LOAD STEP 33 SUBSTEP 3 COMPLETED. CUM ITER = 1131

*** TIME = .820498E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 413.3 CRITERION= .4156
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.169
 HT FLOW CONVERGENCE VALUE= .1143 CRITERION= .4076E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5823E-01
 HT FLOW CONVERGENCE VALUE= .1143E-02 CRITERION= .4077E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 4 COMPLETED. CUM ITER = 1133
 *** TIME = .883613E+10 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 413.6 CRITERION= .4155
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -2.177
 HT FLOW CONVERGENCE VALUE= .1061 CRITERION= .3822E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .5438E-01
 HT FLOW CONVERGENCE VALUE= .9727E-03 CRITERION= .3822E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 33 SUBSTEP 5 COMPLETED. CUM ITER = 1135
 *** TIME = .946728E+10 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:27:56 JUN 18, 1995 CP= 61997.340
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 236.4 CRITERION= .2395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.231
 HT FLOW CONVERGENCE VALUE= .5928E-01 CRITERION= .3691E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2959E-01
 HT FLOW CONVERGENCE VALUE= .5108E-03 CRITERION= .3691E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 1 COMPLETED. CUM ITER = 1137
 *** TIME = .100984E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 236.7 CRITERION= .2395
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.235
 HT FLOW CONVERGENCE VALUE= .5812E-01 CRITERION= .3546E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2828E-01
 HT FLOW CONVERGENCE VALUE= .4649E-03 CRITERION= .3546E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 2 COMPLETED. CUM ITER = 1139
 *** TIME = .107296E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 236.4 CRITERION= .2391
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.233
 HT FLOW CONVERGENCE VALUE= .5668E-01 CRITERION= .3414E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2672E-01
 HT FLOW CONVERGENCE VALUE= .4211E-03 CRITERION= .3415E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 3 COMPLETED. CUM ITER = 1141
 *** TIME = .113607E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 236.7 CRITERION= .2391
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.238
 HT FLOW CONVERGENCE VALUE= .5460E-01 CRITERION= .3269E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2513E-01
 HT FLOW CONVERGENCE VALUE= .3895E-03 CRITERION= .3269E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 4 COMPLETED. CUM ITER = 1143
 *** TIME = .119919E+11 TIME INC = .631152E+09

*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 236.4 CRITERION= .2387
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -1.236
 HT FLOW CONVERGENCE VALUE= .5246E-01 CRITERION= .3137E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .2391E-01
 HT FLOW CONVERGENCE VALUE= .3602E-03 CRITERION= .3138E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 34 SUBSTEP 5 COMPLETED. CUM ITER = 1145
 *** TIME = .126230E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:36:27 JUN 18, 1995 CP= 62414.260
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 172.3 CRITERION= .1751
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8505
 HT FLOW CONVERGENCE VALUE= .3647E-01 CRITERION= .3041E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1624E-01
 HT FLOW CONVERGENCE VALUE= .2441E-03 CRITERION= .3041E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 1 COMPLETED. CUM ITER = 1147
 *** TIME = .132542E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 172.0 CRITERION= .1748
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8479
 HT FLOW CONVERGENCE VALUE= .3538E-01 CRITERION= .2959E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1566E-01
 HT FLOW CONVERGENCE VALUE= .2299E-03 CRITERION= .2959E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 2 COMPLETED. CUM ITER = 1149
 *** TIME = .138853E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 172.3 CRITERION= .1748
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8516
 HT FLOW CONVERGENCE VALUE= .3438E-01 CRITERION= .2863E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1514E-01
 HT FLOW CONVERGENCE VALUE= .2170E-03 CRITERION= .2863E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 3 COMPLETED. CUM ITER = 1151
 *** TIME = .145165E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 172.1 CRITERION= .1745
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8492
 HT FLOW CONVERGENCE VALUE= .3331E-01 CRITERION= .2781E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1455E-01
 HT FLOW CONVERGENCE VALUE= .2050E-03 CRITERION= .2781E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 4 COMPLETED. CUM ITER = 1153
 *** TIME = .151476E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 172.3 CRITERION= .1745
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.8529
 HT FLOW CONVERGENCE VALUE= .3233E-01 CRITERION= .2685E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1406E-01
 HT FLOW CONVERGENCE VALUE= .1929E-03 CRITERION= .2685E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 35 SUBSTEP 5 COMPLETED. CUM ITER = 1155
 *** TIME = .157788E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:43:40 JUN 18, 1995 CP= 62828.970
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 164.4 CRITERION= .1666
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7409
 HT FLOW CONVERGENCE VALUE= .2898E-01 CRITERION= .2623E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1231E-01
 HT FLOW CONVERGENCE VALUE= .1708E-03 CRITERION= .2623E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 1 COMPLETED. CUM ITER = 1157
 *** TIME = .164100E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 164.7 CRITERION= .1667
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7444
 HT FLOW CONVERGENCE VALUE= .2826E-01 CRITERION= .2546E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1205E-01
 HT FLOW CONVERGENCE VALUE= .1623E-03 CRITERION= .2547E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 2 COMPLETED. CUM ITER = 1159
 *** TIME = .170411E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 164.4 CRITERION= .1664
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7418
 HT FLOW CONVERGENCE VALUE= .2747E-01 CRITERION= .2484E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1172E-01
 HT FLOW CONVERGENCE VALUE= .1540E-03 CRITERION= .2484E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 3 COMPLETED. CUM ITER = 1161
 *** TIME = .176723E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 164.7 CRITERION= .1665
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7453
 HT FLOW CONVERGENCE VALUE= .2674E-01 CRITERION= .2408E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1145E-01
 HT FLOW CONVERGENCE VALUE= .1459E-03 CRITERION= .2408E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 4 COMPLETED. CUM ITER = 1163
 *** TIME = .183034E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 164.4 CRITERION= .1662
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.7427
 HT FLOW CONVERGENCE VALUE= .2595E-01 CRITERION= .2346E-01
 EQUIL ITER 2 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= .1113E-01
 HT FLOW CONVERGENCE VALUE= .1379E-03 CRITERION= .2346E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 2
 *** LOAD STEP 36 SUBSTEP 5 COMPLETED. CUM ITER = 1165
 *** TIME = .189346E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:50:52 JUN 18, 1995 CP= 63243.630
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 136.5 CRITERION= .1384

EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5954
 HT FLOW CONVERGENCE VALUE= .2078E-01 CRITERION= .2286E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 1 COMPLETED. CUM ITER = 1166
 *** TIME = .195657E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 136.2 CRITERION= .1382
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5838
 HT FLOW CONVERGENCE VALUE= .2021E-01 CRITERION= .2241E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 2 COMPLETED. CUM ITER = 1167
 *** TIME = .201969E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 136.5 CRITERION= .1383
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5875
 HT FLOW CONVERGENCE VALUE= .1978E-01 CRITERION= .2182E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 3 COMPLETED. CUM ITER = 1168
 *** TIME = .208280E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 136.3 CRITERION= .1381
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5848
 HT FLOW CONVERGENCE VALUE= .1928E-01 CRITERION= .2136E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 4 COMPLETED. CUM ITER = 1169
 *** TIME = .214592E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 136.5 CRITERION= .1381
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5884
 HT FLOW CONVERGENCE VALUE= .1884E-01 CRITERION= .2077E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 37 SUBSTEP 5 COMPLETED. CUM ITER = 1170
 *** TIME = .220903E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 14:55:48 JUN 18, 1995 CP= 63526.640
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 117.5 CRITERION= .1194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5000
 HT FLOW CONVERGENCE VALUE= .1585E-01 CRITERION= .2040E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 1 COMPLETED. CUM ITER = 1171
 *** TIME = .227215E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 117.8 CRITERION= .1194
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5046
 HT FLOW CONVERGENCE VALUE= .1554E-01 CRITERION= .1988E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 2 COMPLETED. CUM ITER = 1172
 *** TIME = .233526E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 117.5 CRITERION= .1192
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5017
 HT FLOW CONVERGENCE VALUE= .1518E-01 CRITERION= .1951E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 3 COMPLETED. CUM ITER = 1173
 *** TIME = .239838E+11 TIME INC = .631152E+09

*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 117.8 CRITERION= .1193
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5052
 HT FLOW CONVERGENCE VALUE= .1486E-01 CRITERION= .1900E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 4 COMPLETED. CUM ITER = 1174
 *** TIME = .246149E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 117.5 CRITERION= .1191
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.5024
 HT FLOW CONVERGENCE VALUE= .1449E-01 CRITERION= .1862E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 38 SUBSTEP 5 COMPLETED. CUM ITER = 1175
 *** TIME = .252461E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:00:41 JUN 18, 1995 CP= 63807.740
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 101.7 CRITERION= .1033
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4226
 HT FLOW CONVERGENCE VALUE= .1217E-01 CRITERION= .1820E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 1 COMPLETED. CUM ITER = 1176
 *** TIME = .258772E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 101.4 CRITERION= .1031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4206
 HT FLOW CONVERGENCE VALUE= .1192E-01 CRITERION= .1792E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 2 COMPLETED. CUM ITER = 1177
 *** TIME = .265084E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 101.7 CRITERION= .1032
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4240
 HT FLOW CONVERGENCE VALUE= .1172E-01 CRITERION= .1749E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 3 COMPLETED. CUM ITER = 1178
 *** TIME = .271395E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 101.4 CRITERION= .1030
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4210
 HT FLOW CONVERGENCE VALUE= .1146E-01 CRITERION= .1721E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 4 COMPLETED. CUM ITER = 1179
 *** TIME = .277707E+11 TIME INC = .631152E+09
 *** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 101.7 CRITERION= .1031
 EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.4244
 HT FLOW CONVERGENCE VALUE= .1125E-01 CRITERION= .1678E-01 <<< CONVERGED
 >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
 *** LOAD STEP 39 SUBSTEP 5 COMPLETED. CUM ITER = 1180
 *** TIME = .284018E+11 TIME INC = .631152E+09

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****

38303 VERSION=HP 9000/7XX 15:05:33 JUN 18, 1995 CP= 64089.830
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

HT FLOW CONVERGENCE VALUE= 85.36 CRITERION= .8706E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3498
HT FLOW CONVERGENCE VALUE= .9258E-02 CRITERION= .1656E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 1 COMPLETED. CUM ITER = 1181
*** TIME = .290330E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.63 CRITERION= .8715E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3539
HT FLOW CONVERGENCE VALUE= .9125E-02 CRITERION= .1620E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 2 COMPLETED. CUM ITER = 1182
*** TIME = .296641E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.36 CRITERION= .8695E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3509
HT FLOW CONVERGENCE VALUE= .8944E-02 CRITERION= .1599E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 3 COMPLETED. CUM ITER = 1183
*** TIME = .302953E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.63 CRITERION= .8704E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3542
HT FLOW CONVERGENCE VALUE= .8805E-02 CRITERION= .1563E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 4 COMPLETED. CUM ITER = 1184
*** TIME = .309264E+11 TIME INC = .631152E+09
*** AUTO STEP TIME: NEXT TIME INC = .63115E+09 UNCHANGED

HT FLOW CONVERGENCE VALUE= 85.36 CRITERION= .8685E-01
EQUIL ITER 1 COMPLETED. NEW TRIANG MATRIX. MAX DOF INC= -.3512
HT FLOW CONVERGENCE VALUE= .8625E-02 CRITERION= .1541E-01 <<< CONVERGED
>>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION 1
*** LOAD STEP 40 SUBSTEP 5 COMPLETED. CUM ITER = 1185
*** TIME = .315576E+11 TIME INC = .631152E+09

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 64372.910

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44h.db
FOR POSSIBLE RESUME FROM THIS POINT

Create element contour plots of solution results

Sort through solution results for time of max temp.

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:10:48 JUN 18, 1995 CP= 64378.610
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

VARIABLE 2 IS AT NODE 1136 ITEM= TEMP COMP= NAME= peakclad

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2 NSOL 1136 TEMP peakclad 79.83 .3156E+11 247.6 .9467E+08

*GET TMTMAX FROM VARI 2 ITEM=EXTR TMAX VALUE= 94672831.6

***** ROUTINE COMPLETED ***** CP = 64378.870

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:10:50 JUN 18, 1995 CP= 64378.900
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/Waste Package with 10 yr old, 49 GWD/MTU SNF

***** ANSYS RESULTS INTERPRETATION (POST1) *****
Create temperature contour plots of WP at peak

GRAPHIC DISPLAY RESET
XYZ TRIAD DISPLAY SET TO OFF

NUMBER KEY SET TO 1 -1=NONE 0=BOTH 1=COLOR 2=NUMBER

MAT NUMBERING KEY = 1

HIDDEN DISPLAY (PRECISE) IN WINDOW 1

ELEMENT OUTLINE STYLE FOR WINDOW 1 IS -1 0=DEFAULT, 1=ALTERNATE, -1=NONE

FOCUS POINT FOR WINDOW 1 .90080E-01 .00000E+00 .00000E+00

UNSELECT FOR ITEM=MAT COMPONENT=
IN RANGE 7 TO 7 STEP 1

4041 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .94673E+08.

SET COMMAND GOT LOAD STEP= 15 SUBSTEP= 40 CUMULATIVE ITERATION= 471
TIME/FREQUENCY= .94673E+08

TITLE=
44 BWR UCF/WP at Time of Peak Temp. (3.000001 years)

/SHOW SWITCH PLOTS TO FILE solupk.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 AUTOMATIC CONTOURS

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solupk.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at Time of Peak Temp. (3.000001 years)

*** WARNING *** CP= 64409.500 TIME= 15:11:26

The selected element set contains mixed materials.

This could invalidate error estimation.

Create temperature contour plots at 10, 50, and 100 yrs

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+09

SET COMMAND GOT LOAD STEP= 22 SUBSTEP= 40 CUMULATIVE ITERATION= 751
TIME/FREQUENCY= .31558E+09

TITLE=

44 BWR UCF/WP at 10 years

/SHOW SWITCH PLOTS TO FILE solu10.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 137.56 BY .99200 TO 263.55

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu10.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 10 years

*** WARNING *** CP= 64446.700 TIME= 15:12:07
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .15779E+10

SET COMMAND GOT LOAD STEP= 26 SUBSTEP= 40 CUMULATIVE ITERATION= 911
TIME/FREQUENCY= .15779E+10

TITLE=

44 BWR UCF/WP at 50 years

/SHOW SWITCH PLOTS TO FILE solu50.grph - RASTER MODE.
- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 137.56 BY .99200 TO 263.55

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu50.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 50 years

*** WARNING *** CP= 64484.120 TIME= 15:12:49
The selected element set contains mixed materials.
This could invalidate error estimation.

USE NEAREST SUBSTEP ON RESULT FILE FOR LOAD CASE 0
USE DATA SET FOR TIME OR FREQUENCY= .31558E+10

SET COMMAND GOT LOAD STEP= 31 SUBSTEP= 40 CUMULATIVE ITERATION= 1111
TIME/FREQUENCY= .31558E+10

TITLE=

44 BWR UCF/WP at 100 years

/SHOW SWITCH PLOTS TO FILE solu100.grph - RASTER MODE.

- GRAPHIC PLANES = 8.

WINDOW 1 HAS 128 CONTOURS DEFINED BY PREVIOUS PLOT ACTION
FROM 137.56 BY .99200 TO 263.55

DISPLAY NODAL SOLUTION, ITEM=TEMP COMP=

CUMULATIVE DISPLAY NUMBER 1 WRITTEN TO FILE solu100.grph - RASTER MODE.
DISPLAY TITLE=
44 BWR UCF/WP at 100 years

*** WARNING *** CP= 64521.350 TIME= 15:13:30
The selected element set contains mixed materials.
This could invalidate error estimation.

ALL SELECT FOR ITEM=ELEM COMPONENT=
IN RANGE 1 TO 4833 STEP 1

4573 ELEMENTS (OF 4573 DEFINED) SELECTED BY ESEL COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CP = 64529.660

Set some needed variable values:

PARAMETER DATM = .9000000E-01
PARAMETER DAT1 = .2500000
PARAMETER DAT2 = .4100000
PARAMETER DAT3 = .5700000

Print time/temperature output at specific locations
Save profile from center to edge

Variable Legend: A01i000

c = center of assembly
h = halfway between center and tube
s = inside structural stainless tube layer
t = stainless tube cladding
g = tube guide
i = inner barrier of DC
o = outer barrier of DC
= ID number of assembly (01 is center)
i = side of assembly toward center of WP
o = side of assembly toward edge of WP
000 = profile center down
045 = profile 45 deg down
090 = profile center side
135 = profile 45 deg up
180 = profile center up

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
38303 VERSION=HP 9000/7XX 15:13:38 JUN 18, 1995 CP= 64529.680
FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

 Temperature Profile from center offset to bottom of WP (0 deg.)

VARIABLE 2	IS AT NODE 3544	ITEM= TEMP COMP=	NAME= ts1i000
VARIABLE 3	IS AT NODE 1094	ITEM= TEMP COMP=	NAME= t01i000
VARIABLE 4	IS AT NODE 1101	ITEM= TEMP COMP=	NAME= s01i000
VARIABLE 5	IS AT NODE 1138	ITEM= TEMP COMP=	NAME= h01i000
VARIABLE 6	IS AT NODE 1136	ITEM= TEMP COMP=	NAME= c01i000
VARIABLE 7	IS AT NODE 1134	ITEM= TEMP COMP=	NAME= h01o000
VARIABLE 8	IS AT NODE 1055	ITEM= TEMP COMP=	NAME= s01o000
VARIABLE 9	IS AT NODE 1047	ITEM= TEMP COMP=	NAME= t01o000
VARIABLE 10	IS AT NODE 1246	ITEM= TEMP COMP=	NAME= s09i000
VARIABLE 11	IS AT NODE 1283	ITEM= TEMP COMP=	NAME= h09i000
VARIABLE 12	IS AT NODE 1281	ITEM= TEMP COMP=	NAME= c09i000
VARIABLE 13	IS AT NODE 1279	ITEM= TEMP COMP=	NAME= h09o000
VARIABLE 14	IS AT NODE 1200	ITEM= TEMP COMP=	NAME= s09o000
VARIABLE 15	IS AT NODE 1192	ITEM= TEMP COMP=	NAME= t09o000
VARIABLE 16	IS AT NODE 1391	ITEM= TEMP COMP=	NAME= s15i000
VARIABLE 17	IS AT NODE 1428	ITEM= TEMP COMP=	NAME= h15i000
VARIABLE 18	IS AT NODE 1426	ITEM= TEMP COMP=	NAME= c15i000
VARIABLE 19	IS AT NODE 1424	ITEM= TEMP COMP=	NAME= h15o000
VARIABLE 20	IS AT NODE 1345	ITEM= TEMP COMP=	NAME= s15o000
VARIABLE 21	IS AT NODE 1337	ITEM= TEMP COMP=	NAME= t15o000
VARIABLE 22	IS AT NODE 1536	ITEM= TEMP COMP=	NAME= s21i000
VARIABLE 23	IS AT NODE 1573	ITEM= TEMP COMP=	NAME= h21i000
VARIABLE 24	IS AT NODE 1571	ITEM= TEMP COMP=	NAME= c21i000
VARIABLE 25	IS AT NODE 1569	ITEM= TEMP COMP=	NAME= h21o000
VARIABLE 26	IS AT NODE 1490	ITEM= TEMP COMP=	NAME= s21o000
VARIABLE 27	IS AT NODE 1482	ITEM= TEMP COMP=	NAME= t21o000
VARIABLE 28	IS AT NODE 4217	ITEM= TEMP COMP=	NAME= i21i000
VARIABLE 29	IS AT NODE 4207	ITEM= TEMP COMP=	NAME= i21o000
VARIABLE 30	IS AT NODE 4437	ITEM= TEMP COMP=	NAME= o21o000

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	NSOL	3544	TEMP	ts1i000	78.43	.3156E+11	227.2	.1262E+09
3	NSOL	1094	TEMP	t01i000	78.43	.3156E+11	227.2	.1262E+09
4	NSOL	1101	TEMP	s01i000	78.44	.3156E+11	227.3	.1262E+09
5	NSOL	1138	TEMP	h01i000	79.35	.3156E+11	240.5	.9467E+08
6	NSOL	1136	TEMP	c01i000	79.83	.3156E+11	247.6	.9467E+08
7	NSOL	1134	TEMP	h01o000	79.99	.3156E+11	250.0	.9467E+08
8	NSOL	1055	TEMP	s01o000	79.79	.3156E+11	247.9	.9467E+08
9	NSOL	1047	TEMP	t01o000	79.79	.3156E+11	247.9	.9467E+08
10	NSOL	1246	TEMP	s09i000	79.79	.3156E+11	247.9	.9467E+08
11	NSOL	1283	TEMP	h09i000	80.17	.3156E+11	251.9	.9467E+08
12	NSOL	1281	TEMP	c09i000	80.21	.3156E+11	251.6	.9467E+08
13	NSOL	1279	TEMP	h09o000	79.98	.3156E+11	247.5	.9467E+08
14	NSOL	1200	TEMP	s09o000	79.42	.3156E+11	239.1	.9467E+08
15	NSOL	1192	TEMP	t09o000	79.42	.3156E+11	239.1	.9467E+08
16	NSOL	1391	TEMP	s15i000	79.42	.3156E+11	239.1	.9467E+08
17	NSOL	1428	TEMP	h15i000	79.47	.3156E+11	237.5	.9467E+08
18	NSOL	1426	TEMP	c15i000	79.20	.3156E+11	231.7	.1262E+09
19	NSOL	1424	TEMP	h15o000	78.65	.3156E+11	222.1	.1262E+09
20	NSOL	1345	TEMP	s15o000	77.80	.3156E+11	208.3	.1578E+09
21	NSOL	1337	TEMP	t15o000	77.80	.3156E+11	208.3	.1578E+09
22	NSOL	1536	TEMP	s21i000	77.80	.3156E+11	208.3	.1578E+09
23	NSOL	1573	TEMP	h21i000	77.72	.3156E+11	205.1	.1578E+09
24	NSOL	1571	TEMP	c21i000	77.35	.3156E+11	198.1	.1578E+09
25	NSOL	1569	TEMP	h21o000	76.71	.3156E+11	187.1	.2209E+09
26	NSOL	1490	TEMP	s21o000	66.48	.1000E-05	170.3	.2525E+09
27	NSOL	1482	TEMP	t21o000	66.37	.1000E-05	170.2	.2525E+09
28	NSOL	4217	TEMP	i21i000	29.31	.1000E-05	150.8	.2840E+09
29	NSOL	4207	TEMP	i21o000	28.35	.1000E-05	149.9	.3156E+09
30	NSOL	4437	TEMP	o21o000	26.14	.1000E-05	148.4	.3156E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:43 JUN 18, 1995 CP= 64533.650
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts1i000	1094 TEMP t01i000	1101 TEMP s01i000	1138 TEMP h01i000	1136 TEMP c01i000	1134 TEMP h01o000
.10000E-05	139.062	139.073	139.178	158.715	168.731	172.062
.20000E-05	176.858	176.869	176.972	194.366	203.393	206.443
31.558	176.859	176.870	176.972	194.366	203.392	206.442
.31558E+07	201.980	201.991	202.090	218.142	226.510	229.399
.63116E+07	207.628	207.639	207.737	223.481	231.704	234.544
.94673E+07	211.042	211.053	211.150	226.660	234.769	237.572
.12623E+08	213.553	213.564	213.660	228.986	237.004	239.777
.15779E+08	215.514	215.524	215.620	230.791	238.733	241.479
.18935E+08	217.115	217.126	217.221	232.257	240.131	242.854
.22090E+08	218.446	218.457	218.551	233.466	241.280	243.982
.25246E+08	219.531	219.541	219.636	234.442	242.203	244.887
.28402E+08	220.454	220.465	220.559	235.266	242.977	245.644
.31558E+08	221.269	221.279	221.373	235.987	243.651	246.301
.63115E+08	225.705	225.716	225.805	239.735	247.050	249.579
.94673E+08	226.981	226.991	227.078	240.523	247.591	250.032
.12623E+09	227.190	227.200	227.284	240.342	247.210	249.580
.15779E+09	226.952	226.961	227.043	239.784	246.487	248.798
.18935E+09	226.159	226.168	226.248	238.682	245.225	247.479
.22090E+09	225.312	225.320	225.398	237.571	243.978	246.183
.25246E+09	224.436	224.445	224.521	236.452	242.734	244.894
.28402E+09	222.908	222.917	222.992	234.718	240.892	243.013
.31558E+09	221.593	221.601	221.674	233.229	239.314	241.402
.63115E+09	205.916	205.923	205.984	215.978	221.242	223.037
.94673E+09	190.761	190.767	190.820	199.632	204.281	205.855
.12623E+10	176.957	176.962	177.008	184.869	189.020	190.420

.15779E+10	165.159	165.164	165.203	172.234	175.946	177.188
.18935E+10	155.557	155.560	155.595	161.943	165.290	166.402
.22090E+10	147.591	147.594	147.625	153.392	156.432	157.434
.25246E+10	140.475	140.478	140.506	145.781	148.565	149.478
.28402E+10	134.895	134.898	134.924	139.800	142.374	143.216
.31558E+10	130.074	130.076	130.100	134.605	136.983	137.759
.63115E+10	106.786	106.788	106.801	109.585	111.055	111.528
.94673E+10	98.0300	98.0311	98.0415	100.203	101.345	101.710
.12623E+11	93.0410	93.0419	93.0505	94.8452	95.7938	96.0962
.15779E+11	89.5600	89.5607	89.5681	91.1218	91.9428	92.2038
.18935E+11	86.4502	86.4509	86.4574	87.8221	88.5430	88.7713
.22090E+11	83.9354	83.9360	83.9418	85.1601	85.8035	86.0068
.25246E+11	81.7797	81.7803	81.7854	82.8804	83.4586	83.6409
.28402E+11	79.9560	79.9564	79.9611	80.9568	81.4825	81.6479
.31558E+11	78.4334	78.4338	78.4380	79.3523	79.8348	79.9864

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:43 JUN 18, 1995 CP= 64533.660
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1055 TEMP s01o000	1047 TEMP t01o000	1246 TEMP s09i000	1283 TEMP h09i000	1281 TEMP c09i000	1279 TEMP h09o000
.10000E-05	168.703	168.701	168.718	175.450	175.914	170.949
.20000E-05	203.552	203.550	203.565	209.165	209.232	204.466
.31558E+07	203.552	203.550	203.565	209.165	209.231	204.466
.63116E+07	226.867	226.865	226.879	231.821	231.722	227.203
.94673E+07	232.060	232.058	232.072	236.877	236.736	232.248
.12623E+08	235.120	235.118	235.132	239.840	239.667	235.209
.15779E+08	237.356	237.354	237.367	241.996	241.803	237.371
.18935E+08	239.083	239.080	239.094	243.659	243.449	239.040
.22090E+08	240.479	240.476	240.490	245.000	244.777	240.390
.25246E+08	241.626	241.623	241.636	246.099	245.864	241.498
.28402E+08	242.547	242.545	242.558	246.979	246.736	242.390
.31558E+08	243.320	243.317	243.330	247.713	247.464	243.136
.63115E+08	243.992	243.989	244.002	248.350	248.095	243.785
.94673E+08	247.370	247.368	247.380	251.491	251.205	247.045
.12623E+09	247.891	247.889	247.901	251.860	251.569	247.531
.15779E+09	247.493	247.491	247.502	251.349	251.060	247.128
.18935E+09	246.756	246.753	246.764	250.522	250.239	246.397
.22090E+09	245.479	245.476	245.487	249.163	248.890	245.140
.25246E+09	244.218	244.216	244.227	247.834	247.571	243.900
.28402E+09	242.963	242.960	242.971	246.515	246.262	242.665
.31558E+09	241.107	241.105	241.116	244.612	244.372	240.842
.63115E+09	239.519	239.517	239.527	242.984	242.754	239.281
.94673E+09	221.367	221.365	221.374	224.474	224.354	221.410
.12623E+10	204.342	204.341	204.348	207.183	207.147	204.599
.15779E+10	189.043	189.042	189.049	191.656	191.677	189.441
.18935E+10	175.930	175.929	175.935	178.331	178.393	176.421
.22090E+10	165.239	165.238	165.244	167.458	167.547	165.789
.25246E+10	156.356	156.355	156.360	158.410	158.516	156.934
.28402E+10	148.478	148.477	148.481	150.387	150.502	149.065
.31558E+10	142.284	142.283	142.287	144.068	144.187	142.868
.63115E+10	136.892	136.891	136.895	138.555	138.676	137.465
.94673E+10	110.970	110.969	110.972	112.047	112.154	111.426
.12623E+11	101.269	101.269	101.271	102.120	102.213	101.654
.15779E+11	95.7272	95.7270	95.7285	96.4404	96.5214	96.0587
.18935E+11	91.8819	91.8817	91.8830	92.5033	92.5758	92.1763
.22090E+11	88.4864	88.4862	88.4874	89.0353	89.1008	88.7506
.25246E+11	85.7514	85.7513	85.7523	86.2432	86.3027	85.9908
.28402E+11	83.4101	83.4100	83.4109	83.8541	83.9087	83.6287
.31558E+11	81.4372	81.4371	81.4379	81.8423	81.8928	81.6388
	79.7923	79.7922	79.7930	80.1654	80.2125	79.9796

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:43 JUN 18, 1995 CP= 64533.670
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1200 TEMP s09o000	1192 TEMP t09o000	1391 TEMP s15i000	1428 TEMP h15i000	1426 TEMP c15i000	1424 TEMP h15o000
.10000E-05	159.461	159.424	159.408	159.336	152.841	140.501
.20000E-05	193.951	193.914	193.895	192.988	186.418	174.691
31.558	193.951	193.914	193.895	192.987	186.418	174.691
.31558E+07	217.451	217.414	217.395	216.104	209.654	198.488
.63116E+07	222.632	222.595	222.575	221.206	214.779	203.730
.94673E+07	225.698	225.661	225.641	224.224	217.820	206.868
.12623E+08	227.947	227.911	227.890	226.437	220.059	209.189
.15779E+08	229.691	229.654	229.634	228.154	221.800	211.003
.18935E+08	231.106	231.070	231.050	229.550	223.220	212.490
.22090E+08	232.273	232.237	232.217	230.702	224.395	213.726
.25246E+08	233.219	233.183	233.163	231.637	225.354	214.741
.28402E+08	234.016	233.980	233.960	232.425	226.165	215.605
.31558E+08	234.714	234.677	234.657	233.115	226.877	216.369
.63115E+08	238.344	238.309	238.290	236.726	230.687	220.588
.94673E+08	239.107	239.073	239.054	237.511	231.645	221.866
.12623E+09	238.933	238.900	238.881	237.370	231.659	222.150
.15779E+09	238.393	238.360	238.342	236.865	231.288	222.008
.18935E+09	237.325	237.294	237.276	235.841	230.403	221.353
.22090E+09	236.248	236.217	236.200	234.804	229.486	220.633
.25246E+09	235.164	235.134	235.118	233.758	228.553	219.885
.28402E+09	233.473	233.444	233.427	232.110	227.010	218.507
.31558E+09	232.023	231.994	231.978	230.695	225.684	217.319
.63115E+09	215.172	215.148	215.136	214.200	210.020	202.939
.94673E+09	199.124	199.105	199.094	198.419	194.864	188.759
.12623E+10	184.582	184.565	184.556	184.076	181.013	175.672
.15779E+10	172.087	172.073	172.065	171.741	169.090	164.395
.18935E+10	161.884	161.871	161.865	161.653	159.326	155.147
.22090E+10	153.390	153.379	153.373	153.238	151.169	147.414
.25246E+10	145.827	145.817	145.812	145.728	143.870	140.467
.28402E+10	139.879	139.870	139.866	139.818	138.125	135.004
.31558E+10	134.707	134.699	134.696	134.675	133.132	130.267
.63115E+10	109.731	109.726	109.724	109.787	108.896	107.182
.94673E+10	100.338	100.335	100.333	100.404	99.7285	98.4127
.12623E+11	94.9667	94.9638	94.9627	95.0301	94.4764	93.3901
.15779E+11	91.2306	91.2281	91.2271	91.2915	90.8166	89.8798
.18935E+11	87.9195	87.9174	87.9166	87.9776	87.5640	86.7438
.22090E+11	85.2488	85.2469	85.2462	85.3035	84.9364	84.2059
.25246E+11	82.9617	82.9600	82.9594	83.0136	82.6857	82.0309
.28402E+11	81.0323	81.0307	81.0301	81.0817	80.7852	80.1911
.31558E+11	79.4228	79.4214	79.4209	79.4699	79.1991	78.6547

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:43 JUN 18, 1995 CP= 64533.690
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1345 TEMP s15o000	1337 TEMP t15o000	1536 TEMP s21i000	1573 TEMP h21i000	1571 TEMP c21i000	1569 TEMP h21o000
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.10000E-05	120.866	120.806	120.770	118.134	108.943	93.0567
.20000E-05	156.605	156.544	156.507	153.354	144.492	129.681
31.558	156.605	156.544	156.507	153.354	144.492	129.681
.31558E+07	181.616	181.556	181.518	178.135	169.679	155.796
.63116E+07	187.085	187.025	186.987	183.563	175.182	161.484
.94673E+07	190.411	190.351	190.313	186.865	178.543	164.996
.12623E+08	192.888	192.828	192.790	189.329	181.063	167.639
.15779E+08	194.836	194.777	194.739	191.270	183.054	169.736
.18935E+08	196.445	196.386	196.348	192.876	184.705	171.484
.22090E+08	197.793	197.734	197.696	194.224	186.096	172.962
.25246E+08	198.911	198.852	198.815	195.344	187.258	174.206
.28402E+08	199.872	199.813	199.775	196.309	188.262	175.286
.31558E+08	200.727	200.668	200.631	197.169	189.160	176.256
.63115E+08	205.639	205.582	205.545	202.157	194.460	182.123
.94673E+08	207.430	207.376	207.340	204.037	196.592	184.687
.12623E+09	208.137	208.083	208.049	204.829	197.600	186.055
.15779E+09	208.345	208.293	208.259	205.116	198.069	186.825
.18935E+09	208.037	207.986	207.954	204.893	198.030	187.085
.22090E+09	207.613	207.564	207.532	204.543	197.839	187.150
.25246E+09	207.138	207.090	207.059	204.139	197.581	187.130
.28402E+09	205.999	205.952	205.921	203.069	196.645	186.404
.31558E+09	205.011	204.964	204.934	202.139	195.826	185.761
.63115E+09	192.475	192.437	192.412	190.166	184.894	176.439
.94673E+09	179.704	179.672	179.652	177.825	173.334	166.077
.12623E+10	167.695	167.668	167.651	166.152	162.260	155.918
.15779E+10	157.338	157.315	157.300	156.059	152.663	147.083
.18935E+10	148.828	148.808	148.795	147.741	144.733	139.772
.22090E+10	141.722	141.704	141.693	140.782	138.094	133.643
.25246E+10	135.292	135.276	135.267	134.470	132.044	128.011
.28402E+10	130.243	130.228	130.219	129.510	127.292	123.592
.31558E+10	125.887	125.874	125.866	125.233	123.204	119.810
.63115E+10	104.529	104.521	104.516	104.198	103.007	100.981
.94673E+10	96.3677	96.3619	96.3587	96.1294	95.2213	93.6696
.12623E+11	91.6976	91.6929	91.6902	91.5088	90.7624	89.4830
.15779E+11	88.4178	88.4137	88.4114	88.2600	87.6185	86.5160
.18935E+11	85.4615	85.4579	85.4560	85.3274	84.7673	83.8024
.22090E+11	83.0625	83.0594	83.0576	82.9453	82.4473	81.5881
.25246E+11	81.0043	81.0015	81.0000	80.9017	80.4562	79.6860
.28402E+11	79.2588	79.2563	79.2549	79.1677	78.7642	78.0658
.31558E+11	77.7995	77.7972	77.7960	77.7176	77.3485	76.7087

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:43 JUN 18, 1995 CP= 64533.700
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1490 TEMP	1482 TEMP	4217 TEMP	4207 TEMP	4437 TEMP
	s21o000	t21o000	i21o000	i21o000	o21o000
.10000E-05	66.4824	66.3741	29.3072	28.3491	26.1414
.20000E-05	105.149	105.034	72.5344	71.4804	69.2517
31.558	105.149	105.034	72.5343	71.4804	69.2517
.31558E+07	132.925	132.809	104.002	102.916	100.774
.63116E+07	138.956	138.840	110.793	109.706	107.593
.94673E+07	142.751	142.635	115.148	114.062	111.968
.12623E+08	145.625	145.509	118.461	117.379	115.306
.15779E+08	147.922	147.807	121.127	120.048	117.992
.18935E+08	149.850	149.736	123.380	122.305	120.265
.22090E+08	151.492	151.378	125.309	124.239	122.213
.25246E+08	152.887	152.773	126.962	125.896	123.884
.28402E+08	154.107	153.993	128.417	127.356	125.357
.31558E+08	155.210	155.097	129.741	128.684	126.697
.63115E+08	162.086	161.976	138.204	137.184	135.290
.94673E+08	165.402	165.295	142.608	141.620	139.798
.12623E+09	167.384	167.280	145.442	144.483	142.721

.15779E+09	168.665	168.563	147.410	146.475	144.762
.18935E+09	169.428	169.329	148.828	147.919	146.255
.22090E+09	169.921	169.824	149.869	148.982	147.361
.25246E+09	170.296	170.202	150.747	149.880	148.298
.28402E+09	169.916	169.824	150.781	149.934	148.386
.31558E+09	169.561	169.470	150.769	149.938	148.419
.63115E+09	162.862	162.788	147.093	146.411	145.155
.94673E+09	154.427	154.365	140.823	140.251	139.189
.12623E+10	145.735	145.682	133.754	133.266	132.348
.15779E+10	138.147	138.101	127.548	127.129	126.331
.18935E+10	131.830	131.790	122.347	121.981	121.278
.22090E+10	126.519	126.484	117.971	117.648	117.022
.25246E+10	121.557	121.525	113.775	113.487	112.924
.28402E+10	117.673	117.644	110.512	110.251	109.737
.31558E+10	114.380	114.354	107.795	107.558	107.089
.63115E+10	97.7407	97.7260	93.7645	93.6315	93.3620
.94673E+10	91.1906	91.1796	88.1327	88.0336	87.8314
.12623E+11	87.4390	87.4301	84.9111	84.8309	84.6662
.15779E+11	84.7548	84.7472	82.5723	82.5039	82.3630
.18935E+11	82.2609	82.2543	80.3469	80.2878	80.1654
.22090E+11	80.2154	80.2096	78.5079	78.4556	78.3469
.25246E+11	78.4555	78.4503	76.9228	76.8764	76.7796
.28402E+11	76.9497	76.9450	75.5583	75.5163	75.4289
.31558E+11	75.6860	75.6817	74.4098	74.3718	74.2921

 * Temperature Profile from center to lower right (45 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts1i045

*** WARNING *** CP= 64533.850 TIME= 15:13:43
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 1017 ITEM= TEMP COMP= NAME= t01i045

VARIABLE 4 IS AT NODE 1025 ITEM= TEMP COMP= NAME= s01i045

VARIABLE 5 IS AT NODE 1124 ITEM= TEMP COMP= NAME= h01i045

VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c01i045

VARIABLE 7 IS AT NODE 1148 ITEM= TEMP COMP= NAME= h01o045

VARIABLE 8 IS AT NODE 1051 ITEM= TEMP COMP= NAME= s01o045

VARIABLE 9 IS AT NODE 1043 ITEM= TEMP COMP= NAME= t01o045

VARIABLE 10 IS AT NODE 2040 ITEM= TEMP COMP= NAME= s11i045

VARIABLE 11 IS AT NODE 2139 ITEM= TEMP COMP= NAME= h11i045

VARIABLE 12 IS AT NODE 2151 ITEM= TEMP COMP= NAME= c11i045

VARIABLE 13 IS AT NODE 2163 ITEM= TEMP COMP= NAME= h11o045

VARIABLE 14 IS AT NODE 2066 ITEM= TEMP COMP= NAME= s11o045

VARIABLE 15 IS AT NODE 2058 ITEM= TEMP COMP= NAME= t11o045

VARIABLE 16 IS AT NODE 2910 ITEM= TEMP COMP= NAME= s19i045

VARIABLE 17 IS AT NODE 3009 ITEM= TEMP COMP= NAME= h19i045

VARIABLE 18 IS AT NODE 3021 ITEM= TEMP COMP= NAME= c19i045

VARIABLE 19 IS AT NODE 3033 ITEM= TEMP COMP= NAME= h19o045

VARIABLE 20 IS AT NODE 2936 ITEM= TEMP COMP= NAME= s19o045

VARIABLE 21 IS AT NODE 2928 ITEM= TEMP COMP= NAME= t19o045
 VARIABLE 22 IS AT NODE 4182 ITEM= TEMP COMP= NAME= i19o045
 VARIABLE 23 IS AT NODE 4411 ITEM= TEMP COMP= NAME= o19o045
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2876 ITEM= TEMP COMP= NAME= c13i045
 VARIABLE 25 IS AT NODE 2296 ITEM= TEMP COMP= NAME= c17i045

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3526 TEMP	ts1i045	78.45	.3156E+11	227.5	.1262E+09
3	NSOL	1017 TEMP	t01i045	78.45	.3156E+11	227.5	.1262E+09
4	NSOL	1025 TEMP	s01i045	78.45	.3156E+11	227.5	.1262E+09
5	NSOL	1124 TEMP	h01i045	79.08	.3156E+11	236.5	.9467E+08
6	NSOL	1136 TEMP	c01i045	79.83	.3156E+11	247.6	.9467E+08
7	NSOL	1148 TEMP	h01o045	80.25	.3156E+11	254.1	.9467E+08
8	NSOL	1051 TEMP	s01o045	80.42	.3156E+11	256.8	.9467E+08
9	NSOL	1043 TEMP	t01o045	80.44	.3156E+11	257.0	.9467E+08
10	NSOL	2040 TEMP	s11i045	80.46	.3156E+11	257.2	.9467E+08
11	NSOL	2139 TEMP	h11i045	80.98	.3156E+11	262.8	.6312E+08
12	NSOL	2151 TEMP	c11i045	81.09	.3156E+11	262.4	.6312E+08
13	NSOL	2163 TEMP	h11o045	80.59	.3156E+11	253.3	.9467E+08
14	NSOL	2066 TEMP	s11o045	79.68	.3156E+11	237.9	.9467E+08
15	NSOL	2058 TEMP	t11o045	79.64	.3156E+11	237.2	.9467E+08
16	NSOL	2910 TEMP	s19i045	79.60	.3156E+11	236.5	.9467E+08
17	NSOL	3009 TEMP	h19i045	78.96	.3156E+11	223.6	.1262E+09
18	NSOL	3021 TEMP	c19i045	77.88	.3156E+11	204.7	.1578E+09
19	NSOL	3033 TEMP	h19o045	76.25	.3156E+11	178.7	.2525E+09
20	NSOL	2936 TEMP	s19o045	35.53	.1000E-05	152.7	.2525E+09
21	NSOL	2928 TEMP	t19o045	34.03	.1000E-05	151.9	.2840E+09
22	NSOL	4182 TEMP	i19o045	29.46	.1000E-05	149.4	.3156E+09
23	NSOL	4411 TEMP	o19o045	26.14	.1000E-05	147.5	.3156E+09
24	NSOL	2876 TEMP	c13i045	79.48	.3156E+11	232.2	.9467E+08
25	NSOL	2296 TEMP	c17i045	79.51	.3156E+11	232.6	.9467E+08
26	NSOL	1490 TEMP	s21o000	66.48	.1000E-05	170.3	.2525E+09
27	NSOL	1482 TEMP	t21o000	66.37	.1000E-05	170.2	.2525E+09
28	NSOL	4217 TEMP	i21i000	29.31	.1000E-05	150.8	.2840E+09
29	NSOL	4207 TEMP	i21o000	28.35	.1000E-05	149.9	.3156E+09
30	NSOL	4437 TEMP	o21o000	26.14	.1000E-05	148.4	.3156E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:46 JUN 18, 1995 CP= 64536.960
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3526 TEMP ts1i045	1017 TEMP t01i045	1025 TEMP s01i045	1124 TEMP h01i045	1136 TEMP c01i045	1148 TEMP h01o045
.10000E-05	139.404	139.405	139.411	152.796	168.731	177.939
.20000E-05	177.199	177.199	177.206	189.079	203.393	211.747
31.558	177.199	177.200	177.206	189.079	203.392	211.747
.31558E+07	202.342	202.351	202.360	213.312	226.510	234.255
.63116E+07	207.990	207.999	208.008	218.744	231.704	239.313
.94673E+07	211.403	211.412	211.421	221.995	234.769	242.276
.12623E+08	213.912	213.921	213.930	224.376	237.004	244.428
.15779E+08	215.871	215.880	215.889	226.228	238.733	246.086
.18935E+08	217.471	217.480	217.489	227.734	240.131	247.421

.22090E+08	218.801	218.810	218.819	228.980	241.280	248.513
.25246E+08	219.884	219.893	219.902	229.989	242.203	249.386
.28402E+08	220.807	220.816	220.824	230.843	242.977	250.113
.31558E+08	221.620	221.629	221.637	231.591	243.651	250.743
.63115E+08	226.044	226.053	226.061	235.545	247.050	253.813
.94673E+08	227.310	227.318	227.326	236.479	247.591	254.117
.12623E+09	227.509	227.518	227.526	236.414	247.210	253.547
.15779E+09	227.263	227.271	227.279	235.951	246.487	252.668
.18935E+09	226.462	226.470	226.478	234.941	245.225	251.255
.22090E+09	225.608	225.616	225.623	233.909	243.978	249.878
.25246E+09	224.726	224.734	224.741	232.863	242.734	248.514
.28402E+09	223.192	223.200	223.207	231.189	240.892	246.569
.31558E+09	221.871	221.878	221.885	229.752	239.314	244.906
.63115E+09	206.146	206.152	206.158	212.967	221.242	226.057
.94673E+09	190.955	190.961	190.966	196.971	204.281	208.512
.12623E+10	177.123	177.128	177.133	182.493	189.020	192.793
.15779E+10	165.303	165.308	165.311	170.110	175.946	179.306
.18935E+10	155.683	155.687	155.690	160.025	165.290	168.304
.22090E+10	147.703	147.706	147.709	151.650	156.432	159.154
.25246E+10	140.576	140.579	140.582	144.187	148.565	151.050
.28402E+10	134.987	134.990	134.993	138.326	142.374	144.668
.31558E+10	130.158	130.161	130.163	133.243	136.983	139.099
.63115E+10	106.835	106.837	106.838	108.743	111.055	112.350
.94673E+10	98.0670	98.0686	98.0697	99.5498	101.345	102.346
.12623E+11	93.0716	93.0729	93.0739	94.3030	95.7938	96.6240
.15779E+11	89.5862	89.5874	89.5882	90.6526	91.9428	92.6599
.18935E+11	86.4732	86.4742	86.4750	87.4100	88.5430	89.1711
.22090E+11	83.9558	83.9567	83.9574	84.7923	85.8035	86.3634
.25246E+11	81.7980	81.7988	81.7994	82.5499	83.4586	83.9608
.28402E+11	79.9725	79.9733	79.9738	80.6564	81.4825	81.9384
.31558E+11	78.4485	78.4493	78.4498	79.0765	79.8348	80.2528

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:46 JUN 18, 1995 CP= 64536.970
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1051 TEMP s01o045	1043 TEMP t01o045	2040 TEMP s11i045	2139 TEMP h11i045	2151 TEMP c11i045	2163 TEMP h11o045
.10000E-05	182.226	182.619	182.987	192.563	194.134	184.166
.20000E-05	215.451	215.785	216.096	224.104	224.696	214.717
31.558	215.451	215.785	216.096	224.103	224.695	214.717
.31558E+07	237.602	237.899	238.174	245.172	245.188	235.379
.63116E+07	242.578	242.867	243.135	249.938	249.843	240.049
.94673E+07	245.474	245.757	246.020	252.678	252.505	242.747
.12623E+08	247.579	247.858	248.116	254.658	254.429	244.708
.15779E+08	249.196	249.471	249.726	256.172	255.900	246.215
.18935E+08	250.495	250.767	251.019	257.382	257.076	247.427
.22090E+08	251.556	251.825	252.074	258.365	258.029	248.416
.25246E+08	252.400	252.667	252.913	259.142	258.782	249.204
.28402E+08	253.102	253.366	253.611	259.783	259.403	249.858
.31558E+08	253.707	253.970	254.212	260.333	259.935	250.424
.63115E+08	256.604	256.852	257.080	262.848	262.357	253.132
.94673E+08	256.792	257.030	257.249	262.797	262.277	253.296
.12623E+09	256.132	256.362	256.575	261.960	261.435	252.667
.15779E+09	255.181	255.405	255.612	260.870	260.349	251.766
.18935E+09	253.699	253.918	254.120	259.262	258.755	250.363
.22090E+09	252.265	252.480	252.678	257.724	257.232	249.005
.25246E+09	250.849	251.060	251.254	256.212	255.735	247.664
.28402E+09	248.860	249.068	249.259	254.152	253.700	245.774
.31558E+09	247.160	247.365	247.554	252.392	251.961	244.158
.63115E+09	227.996	228.175	228.342	232.676	232.467	225.851
.94673E+09	210.221	210.382	210.532	214.491	214.456	208.742

.12623E+10	194.323	194.470	194.607	198.262	198.355	193.344
.15779E+10	180.674	180.808	180.932	184.284	184.460	180.055
.18935E+10	169.530	169.651	169.765	172.855	173.086	169.166
.22090E+10	160.256	160.367	160.472	163.328	163.592	160.072
.25246E+10	152.052	152.154	152.250	154.908	155.197	152.006
.28402E+10	145.593	145.688	145.778	148.265	148.565	145.636
.31558E+10	139.953	140.042	140.125	142.445	142.747	140.060
.63115E+10	112.874	112.930	112.983	114.486	114.750	113.148
.94673E+10	102.749	102.793	102.835	104.023	104.249	103.021
.12623E+11	96.9579	96.9946	97.0292	98.0253	98.2238	97.2091
.15779E+11	92.9478	92.9797	93.0097	93.8775	94.0549	93.1804
.18935E+11	89.4228	89.4508	89.4772	90.2434	90.4040	89.6390
.22090E+11	86.5873	86.6124	86.6360	87.3226	87.4688	86.7882
.25246E+11	84.1614	84.1840	84.2053	84.8246	84.9589	84.3490
.28402E+11	82.1201	82.1406	82.1600	82.7252	82.8493	82.2964
.31558E+11	80.4193	80.4381	80.4560	80.9761	81.0919	80.5854

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:46 JUN 18, 1995 CP= 64536.990
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2066 TEMP s11o045	2058 TEMP t11o045	2910 TEMP s19i045	3009 TEMP h19i045	3021 TEMP c19i045	3033 TEMP h19o045
.10000E-05	165.514	164.688	163.836	149.018	123.960	83.2207
.20000E-05	196.718	195.906	195.067	180.260	156.482	119.535
31.558	196.718	195.906	195.068	180.260	156.482	119.535
.31558E+07	218.101	217.312	216.497	201.974	179.316	145.137
.63116E+07	222.898	222.113	221.303	206.857	184.441	150.879
.94673E+07	225.717	224.937	224.133	209.769	187.557	154.466
.12623E+08	227.787	227.012	226.212	211.919	189.887	157.176
.15779E+08	229.390	228.618	227.823	213.597	191.723	159.335
.18935E+08	230.690	229.922	229.131	214.970	193.240	161.137
.22090E+08	231.761	230.996	230.208	216.109	194.512	162.667
.25246E+08	232.625	231.864	231.080	217.041	195.568	163.954
.28402E+08	233.353	232.595	231.814	217.833	196.478	165.079
.31558E+08	233.989	233.234	232.457	218.532	197.289	166.093
.63115E+08	237.278	236.549	235.798	222.350	201.992	172.329
.94673E+08	237.909	237.201	236.472	223.423	203.744	175.199
.12623E+09	237.678	236.989	236.280	223.578	204.465	176.829
.15779E+09	237.117	236.444	235.751	223.348	204.710	177.824
.18935E+09	236.058	235.401	234.726	222.628	204.464	178.312
.22090E+09	234.997	234.355	233.694	221.861	204.103	178.574
.25246E+09	233.934	233.305	232.658	221.071	203.690	178.736
.28402E+09	232.296	231.680	231.045	219.685	202.639	178.184
.31558E+09	230.892	230.286	229.661	218.492	201.726	177.686
.63115E+09	214.551	214.040	213.513	204.137	189.969	169.693
.94673E+09	198.929	198.489	198.037	190.024	177.839	160.330
.12623E+10	184.709	184.326	183.932	176.989	166.336	150.936
.15779E+10	172.426	172.090	171.745	165.703	156.342	142.732
.18935E+10	162.351	162.054	161.748	156.417	148.078	135.925
.22090E+10	153.933	153.667	153.393	148.639	141.152	130.209
.25246E+10	146.426	146.186	145.939	141.656	134.870	124.918
.28402E+10	140.507	140.288	140.061	136.151	129.923	120.769
.31558E+10	135.346	135.144	134.937	131.364	125.648	117.229
.63115E+10	110.306	110.187	110.064	107.980	104.566	99.4764
.94673E+10	100.833	100.742	100.649	99.0643	96.4449	92.5278
.12623E+11	95.3994	95.3246	95.2477	93.9467	91.7862	88.5467
.15779E+11	91.6184	91.5540	91.4878	90.3715	88.5101	85.7132
.18935E+11	88.2710	88.2148	88.1570	87.1842	85.5560	83.1042
.22090E+11	85.5695	85.5195	85.4681	84.6046	83.1549	80.9686
.25246E+11	83.2561	83.2114	83.1654	82.3937	81.0950	79.1329
.28402E+11	81.3045	81.2640	81.2224	80.5246	79.3469	77.5652

1 .31558E+11 79.6764 79.6394 79.6013 78.9633 77.8847 76.2509

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:46 JUN 18, 1995 CP= 64537.000
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2936 TEMP s19o045	2928 TEMP t19o045	4182 TEMP i19o045	4411 TEMP o19o045	2876 TEMP c13i045	2296 TEMP c17i045
.10000E-05	35.5308	34.0306	29.4560	26.1414	160.478	160.478
.20000E-05	77.7095	76.3997	72.2675	69.2251	191.103	191.112
.31558E+07	77.7094	76.3997	72.2675	69.2251	191.103	191.112
.63116E+07	107.425	106.247	102.459	99.6078	212.062	212.450
.94673E+07	114.052	112.905	109.202	106.419	216.819	217.214
.12623E+08	118.307	117.181	113.541	110.803	219.630	220.025
.15779E+08	121.538	120.431	116.842	114.145	221.698	222.094
.18935E+08	124.140	123.048	119.503	116.840	223.306	223.701
.22090E+08	126.334	125.254	121.751	119.118	224.614	225.009
.25246E+08	128.212	127.145	123.679	121.073	225.696	226.089
.28402E+08	129.814	128.757	125.325	122.743	226.572	226.967
.31558E+08	131.228	130.181	126.780	124.220	227.313	227.708
.63115E+08	132.513	131.475	128.103	125.563	227.963	228.358
.94673E+08	140.722	139.750	136.586	134.197	231.401	231.789
.12623E+09	144.970	144.042	141.023	138.740	232.182	232.563
.15779E+09	147.688	146.795	143.889	141.690	232.092	232.467
.18935E+09	149.565	148.700	145.886	143.755	231.656	232.025
.22090E+09	150.898	150.060	147.333	145.267	230.730	231.095
.25246E+09	151.872	151.056	148.403	146.392	229.786	230.146
.28402E+09	152.687	151.891	149.304	147.344	228.831	229.188
.31558E+09	152.683	151.904	149.373	147.456	227.302	227.651
.63115E+09	152.639	151.875	149.390	147.507	225.988	226.331
.94673E+09	148.669	148.029	145.948	144.377	210.512	210.814
.12623E+10	142.199	141.647	139.855	138.508	195.544	195.815
.15779E+10	134.994	134.508	132.933	131.753	181.850	182.089
.18935E+10	128.660	128.229	126.839	125.800	170.007	170.223
.22090E+10	123.351	122.966	121.723	120.797	160.269	160.467
.25246E+10	118.878	118.531	117.413	116.581	152.112	152.295
.28402E+10	114.609	114.293	113.278	112.522	144.810	144.978
.31558E+10	111.281	110.990	110.057	109.362	139.050	139.208
.63115E+10	108.502	108.234	107.377	106.738	134.029	134.178
.94673E+10	94.1973	94.0350	93.5192	93.1384	109.586	109.683
.12623E+11	88.4645	88.3396	87.9440	87.6531	100.302	100.380
.15779E+11	85.1840	85.0806	84.7542	84.5144	94.9688	95.0356
.18935E+11	82.8084	82.7190	82.4370	82.2304	91.2535	91.3120
.22090E+11	80.5555	80.4770	80.2303	80.0495	87.9571	88.0084
.25246E+11	78.6947	78.6247	78.4044	78.2432	85.2933	85.3392
.28402E+11	77.0907	77.0278	76.8304	76.6860	83.0116	83.0531
.31558E+11	75.7104	75.6532	75.4738	75.3428	81.0850	81.1232
	74.5488	74.4964	74.3322	74.2121	79.4770	79.5125

 Temp. Profile from lower center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3824 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64537.160 TIME= 15:13:46
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 1021 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 1031 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 1122 ITEM= TEMP COMP= NAME= h02i180
 VARIABLE 6 IS AT NODE 1136 ITEM= TEMP COMP= NAME= c02i180
 VARIABLE 7 IS AT NODE 1150 ITEM= TEMP COMP= NAME= h02o180
 VARIABLE 8 IS AT NODE 1079 ITEM= TEMP COMP= NAME= s02o180
 VARIABLE 9 IS AT NODE 1071 ITEM= TEMP COMP= NAME= t02o180
 VARIABLE 10 IS AT NODE 1901 ITEM= TEMP COMP= NAME= s10i180
 VARIABLE 11 IS AT NODE 1992 ITEM= TEMP COMP= NAME= h10i180
 VARIABLE 12 IS AT NODE 2006 ITEM= TEMP COMP= NAME= c10i180
 VARIABLE 13 IS AT NODE 2020 ITEM= TEMP COMP= NAME= h10o180
 VARIABLE 14 IS AT NODE 1949 ITEM= TEMP COMP= NAME= s10o180
 VARIABLE 15 IS AT NODE 1941 ITEM= TEMP COMP= NAME= t10o180
 VARIABLE 16 IS AT NODE 2626 ITEM= TEMP COMP= NAME= s16i180
 VARIABLE 17 IS AT NODE 2717 ITEM= TEMP COMP= NAME= h16i180
 VARIABLE 18 IS AT NODE 2731 ITEM= TEMP COMP= NAME= c16i180
 VARIABLE 19 IS AT NODE 2745 ITEM= TEMP COMP= NAME= h16o180
 VARIABLE 20 IS AT NODE 2674 ITEM= TEMP COMP= NAME= s16o180
 VARIABLE 21 IS AT NODE 2666 ITEM= TEMP COMP= NAME= t16o180
 VARIABLE 22 IS AT NODE 3061 ITEM= TEMP COMP= NAME= s22i180
 VARIABLE 23 IS AT NODE 3152 ITEM= TEMP COMP= NAME= h22i180
 VARIABLE 24 IS AT NODE 3166 ITEM= TEMP COMP= NAME= c22i180
 VARIABLE 25 IS AT NODE 3180 ITEM= TEMP COMP= NAME= h22o180
 VARIABLE 26 IS AT NODE 3109 ITEM= TEMP COMP= NAME= s22o180
 VARIABLE 27 IS AT NODE 3101 ITEM= TEMP COMP= NAME= t22o180
 VARIABLE 28 IS AT NODE 4254 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 4157 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4385 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3824 TEMP	ts2i180	78.45	.3156E+11	227.4	.1262E+09
3	NSOL	1021 TEMP	t02i180	78.45	.3156E+11	227.4	.1262E+09
4	NSOL	1031 TEMP	s02i180	78.45	.3156E+11	227.5	.1262E+09
5	NSOL	1122 TEMP	h02i180	79.36	.3156E+11	240.6	.9467E+08
6	NSOL	1136 TEMP	c02i180	79.83	.3156E+11	247.6	.9467E+08
7	NSOL	1150 TEMP	h02o180	79.98	.3156E+11	249.9	.9467E+08
8	NSOL	1079 TEMP	s02o180	79.78	.3156E+11	247.7	.9467E+08
9	NSOL	1071 TEMP	t02o180	79.78	.3156E+11	247.7	.9467E+08
10	NSOL	1901 TEMP	s10i180	79.78	.3156E+11	247.7	.9467E+08
11	NSOL	1992 TEMP	h10i180	80.14	.3156E+11	251.6	.9467E+08
12	NSOL	2006 TEMP	c10i180	80.18	.3156E+11	251.2	.9467E+08
13	NSOL	2020 TEMP	h10o180	79.94	.3156E+11	247.1	.9467E+08

14 NSOL	1949 TEMP	s10o180	79.37	.3156E+11	238.6	.9467E+08
15 NSOL	1941 TEMP	t10o180	79.37	.3156E+11	238.5	.9467E+08
16 NSOL	2626 TEMP	s16i180	79.37	.3156E+11	238.5	.9467E+08
17 NSOL	2717 TEMP	h16i180	79.41	.3156E+11	236.9	.9467E+08
18 NSOL	2731 TEMP	c16i180	79.13	.3156E+11	230.9	.1262E+09
19 NSOL	2745 TEMP	h16o180	78.58	.3156E+11	221.3	.1262E+09
20 NSOL	2674 TEMP	s16o180	77.72	.3156E+11	207.4	.1578E+09
21 NSOL	2666 TEMP	t16o180	77.71	.3156E+11	207.4	.1578E+09
22 NSOL	3061 TEMP	s22i180	77.71	.3156E+11	207.3	.1578E+09
23 NSOL	3152 TEMP	h22i180	77.63	.3156E+11	204.1	.1578E+09
24 NSOL	3166 TEMP	c22i180	77.25	.3156E+11	196.9	.1578E+09
25 NSOL	3180 TEMP	h22o180	76.60	.3156E+11	185.9	.2209E+09
26 NSOL	3109 TEMP	s22o180	66.48	.1000E-05	168.9	.2525E+09
27 NSOL	3101 TEMP	t22o180	66.37	.1000E-05	168.8	.2525E+09
28 NSOL	4254 TEMP	i22i180	29.31	.1000E-05	149.1	.3156E+09
29 NSOL	4157 TEMP	i22o180	28.35	.1000E-05	148.2	.3156E+09
30 NSOL	4385 TEMP	o22o180	26.14	.1000E-05	146.6	.3156E+09

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 18, 1995 CP= 64540.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3824 TEMP ts2i180	1021 TEMP t02i180	1031 TEMP s02i180	1122 TEMP h02i180	1136 TEMP c02i180	1150 TEMP h02o180
.10000E-05	139.062	139.073	139.178	158.715	168.731	172.062
.20000E-05	176.864	176.875	176.977	194.369	203.393	206.440
31.558	176.864	176.875	176.977	194.369	203.392	206.440
.31558E+07	202.193	202.204	202.302	218.242	226.510	229.303
.63116E+07	207.843	207.854	207.951	223.582	231.704	234.446
.94673E+07	211.256	211.267	211.364	226.761	234.769	237.474
.12623E+08	213.766	213.777	213.873	229.087	237.004	239.680
.15779E+08	215.726	215.736	215.831	230.891	238.733	241.383
.18935E+08	217.326	217.337	217.432	232.356	240.131	242.757
.22090E+08	218.656	218.667	218.761	233.565	241.280	243.886
.25246E+08	219.741	219.752	219.846	234.542	242.203	244.790
.28402E+08	220.665	220.675	220.768	235.366	242.977	245.547
.31558E+08	221.479	221.489	221.582	236.086	243.651	246.205
.63115E+08	225.909	225.919	226.008	239.831	247.050	249.486
.94673E+08	227.179	227.189	227.275	240.617	247.591	249.940
.12623E+09	227.384	227.393	227.477	240.434	247.210	249.490
.15779E+09	227.141	227.151	227.232	239.874	246.487	248.710
.18935E+09	226.346	226.355	226.434	238.770	245.225	247.393
.22090E+09	225.495	225.504	225.581	237.658	243.978	246.098
.25246E+09	224.617	224.626	224.702	236.538	242.734	244.810
.28402E+09	223.085	223.094	223.168	234.802	240.892	242.931
.31558E+09	221.766	221.774	221.847	233.312	239.314	241.322
.63115E+09	206.066	206.072	206.134	216.050	221.242	222.967
.94673E+09	190.894	190.899	190.952	199.695	204.281	205.792
.12623E+10	177.074	177.078	177.124	184.925	189.020	190.365
.15779E+10	165.264	165.268	165.307	172.285	175.946	177.139
.18935E+10	155.651	155.655	155.690	161.988	165.290	166.357
.22090E+10	147.678	147.681	147.712	153.435	156.432	157.392
.25246E+10	140.555	140.558	140.586	145.820	148.565	149.440
.28402E+10	134.970	134.973	134.998	139.836	142.374	143.181
.31558E+10	130.144	130.146	130.170	134.639	136.983	137.726
.63115E+10	106.831	106.833	106.846	109.607	111.055	111.506
.94673E+10	98.0662	98.0672	98.0776	100.221	101.345	101.692
.12623E+11	93.0719	93.0728	93.0813	94.8604	95.7938	96.0813
.15779E+11	89.5870	89.5877	89.5951	91.1351	91.9428	92.1907
.18935E+11	86.4739	86.4746	86.4810	87.8337	88.5430	88.7598
.22090E+11	83.9567	83.9572	83.9629	85.1705	85.8035	85.9966
.25246E+11	81.7989	81.7994	81.8045	82.8899	83.4586	83.6316

.28402E+11	79.9736	79.9741	79.9787	80.9655	81.4825	81.6393
.31558E+11	78.4498	78.4502	78.4544	79.3603	79.8348	79.9785

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 18, 1995 CP= 64540.930
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1079 TEMP s02o180	1071 TEMP t02o180	1901 TEMP s10i180	1992 TEMP h10i180	2006 TEMP c10i180	2020 TEMP h10o180
.10000E-05	168.703	168.701	168.718	175.450	175.914	170.949
.20000E-05	203.547	203.545	203.560	209.159	209.223	204.455
31.558	203.547	203.545	203.560	209.158	209.222	204.454
.31558E+07	226.671	226.668	226.682	231.537	231.348	226.730
.63116E+07	231.862	231.859	231.873	236.590	236.356	231.769
.94673E+07	234.923	234.920	234.933	239.553	239.289	234.732
.12623E+08	237.159	237.156	237.169	241.710	241.425	236.894
.15779E+08	238.886	238.884	238.896	243.374	243.072	238.565
.18935E+08	240.283	240.280	240.293	244.715	244.400	239.916
.22090E+08	241.431	241.428	241.440	245.815	245.490	241.026
.25246E+08	242.352	242.349	242.362	246.694	246.360	241.916
.28402E+08	243.125	243.122	243.134	247.429	247.088	242.663
.31558E+08	243.797	243.794	243.806	248.067	247.720	243.313
.63115E+08	247.181	247.178	247.189	251.214	250.839	246.584
.94673E+08	247.706	247.704	247.715	251.590	251.212	247.081
.12623E+09	247.312	247.309	247.320	251.084	250.710	246.686
.15779E+09	246.578	246.575	246.586	250.262	249.895	245.962
.18935E+09	245.304	245.301	245.311	248.906	248.551	244.712
.22090E+09	244.046	244.043	244.054	247.581	247.237	243.479
.25246E+09	242.793	242.790	242.800	246.266	245.932	242.249
.28402E+09	240.941	240.939	240.949	244.369	244.049	240.435
.31558E+09	239.356	239.354	239.363	242.745	242.437	238.881
.63115E+09	221.226	221.224	221.232	224.266	224.078	221.062
.94673E+09	204.216	204.215	204.222	206.998	206.901	204.289
.12623E+10	188.932	188.931	188.937	191.492	191.459	189.166
.15779E+10	175.830	175.829	175.835	178.183	178.196	176.174
.18935E+10	165.149	165.148	165.153	167.323	167.368	165.564
.22090E+10	156.272	156.271	156.276	158.286	158.351	156.726
.25246E+10	148.401	148.400	148.405	150.273	150.350	148.874
.28402E+10	142.212	142.211	142.215	143.960	144.044	142.688
.31558E+10	136.825	136.824	136.828	138.455	138.542	137.296
.63115E+10	110.926	110.926	110.928	111.981	112.067	111.317
.94673E+10	101.234	101.234	101.235	102.068	102.143	101.565
.12623E+11	95.6972	95.6970	95.6984	96.3953	96.4613	95.9832
.15779E+11	91.8556	91.8554	91.8567	92.4638	92.5230	92.1101
.18935E+11	88.4634	88.4632	88.4643	89.0007	89.0546	88.6926
.22090E+11	85.7308	85.7306	85.7316	86.2122	86.2613	85.9388
.25246E+11	83.3915	83.3913	83.3922	83.8260	83.8712	83.5817
.28402E+11	81.4200	81.4199	81.4207	81.8164	81.8583	81.5955
.31558E+11	79.7764	79.7762	79.7769	80.1414	80.1804	79.9394

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 18, 1995 CP= 64540.940
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1949 TEMP	1941 TEMP	2626 TEMP	2717 TEMP	2731 TEMP	2745 TEMP
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	s10o180	t10o180	s16i180	h16i180	c16i180	h16o180
.10000E-05	159.461	159.424	159.408	159.336	152.841	140.501
.20000E-05	193.937	193.900	193.881	192.972	186.400	174.670
31.558	193.937	193.900	193.881	192.971	186.400	174.670
.31558E+07	216.865	216.827	216.807	215.431	208.882	197.597
.63116E+07	222.038	222.001	221.981	220.525	213.997	202.828
.94673E+07	225.107	225.070	225.050	223.545	217.041	205.971
.12623E+08	227.357	227.320	227.299	225.759	219.281	208.294
.15779E+08	229.103	229.066	229.045	227.479	221.025	210.111
.18935E+08	230.520	230.483	230.463	228.876	222.447	211.600
.22090E+08	231.690	231.653	231.632	230.031	223.625	212.840
.25246E+08	232.634	232.597	232.577	230.964	224.581	213.853
.28402E+08	233.432	233.395	233.375	231.753	225.394	214.719
.31558E+08	234.130	234.094	234.073	232.444	226.107	215.484
.63115E+08	237.775	237.740	237.720	236.071	229.936	219.725
.94673E+08	238.552	238.517	238.498	236.871	230.911	221.024
.12623E+09	238.388	238.355	238.336	236.742	230.939	221.324
.15779E+09	237.858	237.825	237.807	236.249	230.581	221.197
.18935E+09	236.799	236.767	236.749	235.234	229.706	220.554
.22090E+09	235.730	235.699	235.681	234.206	228.799	219.847
.25246E+09	234.653	234.622	234.605	233.167	227.874	219.107
.28402E+09	232.973	232.943	232.927	231.532	226.346	217.747
.31558E+09	231.532	231.503	231.486	230.127	225.032	216.572
.63115E+09	214.745	214.721	214.708	213.705	209.451	202.288
.94673E+09	198.745	198.724	198.714	197.977	194.357	188.181
.12623E+10	184.247	184.229	184.220	183.686	180.565	175.161
.15779E+10	171.785	171.770	171.763	171.390	168.687	163.936
.18935E+10	161.609	161.597	161.590	161.333	158.959	154.729
.22090E+10	153.136	153.125	153.120	152.942	150.829	147.027
.25246E+10	145.594	145.584	145.579	145.457	143.558	140.112
.28402E+10	139.661	139.652	139.648	139.564	137.833	134.671
.31558E+10	134.503	134.495	134.491	134.437	132.857	129.955
.63115E+10	109.598	109.594	109.592	109.632	108.717	106.979
.94673E+10	100.231	100.228	100.226	100.279	99.5847	98.2498
.12623E+11	94.8755	94.8726	94.8714	94.9231	94.3534	93.2507
.15779E+11	91.1507	91.1481	91.1471	91.1977	90.7088	89.7578
.18935E+11	87.8496	87.8474	87.8465	87.8955	87.4696	86.6369
.22090E+11	85.1861	85.1841	85.1834	85.2299	84.8518	84.1102
.25246E+11	82.9050	82.9033	82.9026	82.9471	82.6092	81.9443
.28402E+11	80.9801	80.9785	80.9779	81.0205	80.7148	80.1114
.31558E+11	79.3743	79.3729	79.3723	79.4130	79.1336	78.5806

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 18, 1995 CP= 64540.950
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2674 TEMP s16o180	2666 TEMP t16o180	3061 TEMP s22i180	3152 TEMP h22i180	3166 TEMP c22i180	3180 TEMP h22o180
.10000E-05	120.866	120.806	120.770	118.134	108.943	93.0567
.20000E-05	156.581	156.520	156.483	153.327	144.462	129.647
31.558	156.581	156.520	156.483	153.327	144.462	129.648
.31558E+07	180.582	180.521	180.482	177.008	168.429	154.377
.63116E+07	186.039	185.978	185.940	182.422	173.916	160.051
.94673E+07	189.370	189.309	189.271	185.728	177.283	163.570
.12623E+08	191.848	191.788	191.749	188.194	179.804	166.216
.15779E+08	193.802	193.742	193.703	190.140	181.801	168.320
.18935E+08	195.413	195.353	195.315	191.749	183.456	170.072
.22090E+08	196.765	196.705	196.667	193.100	184.851	171.556
.25246E+08	197.881	197.821	197.783	194.218	186.010	172.796
.28402E+08	198.843	198.784	198.746	195.185	187.016	173.879
.31558E+08	199.700	199.641	199.603	196.047	187.916	174.852

.63115E+08	204.640	204.583	204.546	201.064	193.247	180.755
.94673E+08	206.457	206.402	206.366	202.971	195.409	183.354
.12623E+09	207.183	207.129	207.095	203.785	196.441	184.748
.15779E+09	207.410	207.357	207.323	204.091	196.932	185.543
.18935E+09	207.116	207.065	207.032	203.883	196.910	185.823
.22090E+09	206.707	206.657	206.624	203.550	196.736	185.909
.25246E+09	206.243	206.194	206.163	203.157	196.492	185.904
.28402E+09	205.124	205.077	205.046	202.110	195.581	185.206
.31558E+09	204.152	204.105	204.074	201.197	194.782	184.585
.63115E+09	191.730	191.692	191.667	189.348	183.988	175.422
.94673E+09	179.045	179.012	178.992	177.100	172.532	165.177
.12623E+10	167.114	167.087	167.069	165.513	161.553	155.125
.15779E+10	156.816	156.792	156.778	155.484	152.026	146.371
.18935E+10	148.354	148.333	148.320	147.218	144.154	139.125
.22090E+10	141.284	141.266	141.255	140.299	137.560	133.047
.25246E+10	134.891	134.875	134.865	134.027	131.554	127.464
.28402E+10	129.867	129.852	129.843	129.096	126.834	123.082
.31558E+10	125.535	125.521	125.513	124.844	122.774	119.331
.63115E+10	104.301	104.293	104.289	103.946	102.728	100.672
.94673E+10	96.1849	96.1790	96.1756	95.9268	94.9974	93.4215
.12623E+11	91.5414	91.5366	91.5338	91.3356	90.5711	89.2711
.15779E+11	88.2810	88.2769	88.2745	88.1084	87.4510	86.3306
.18935E+11	85.3417	85.3382	85.3361	85.1946	84.6207	83.6402
.22090E+11	82.9552	82.9521	82.9503	82.8264	82.3159	81.4428
.25246E+11	80.9074	80.9046	80.9030	80.7942	80.3375	79.5548
.28402E+11	79.1696	79.1670	79.1656	79.0687	78.6550	77.9450
.31558E+11	77.7166	77.7143	77.7130	77.6257	77.2470	76.5965

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:50 JUN 18, 1995 CP= 64540.970
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3109 TEMP	3101 TEMP	4254 TEMP	4157 TEMP	4385 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4824	66.3740	29.3072	28.3491	26.1414
.20000E-05	105.110	104.996	72.4840	71.4299	69.1984
31.558	105.110	104.996	72.4840	71.4299	69.1984
.31558E+07	131.264	131.147	101.819	100.719	98.4417
.63116E+07	137.279	137.162	108.597	107.496	105.245
.94673E+07	141.082	140.965	112.968	111.868	109.638
.12623E+08	143.958	143.841	116.290	115.193	112.984
.15779E+08	146.264	146.148	118.971	117.878	115.688
.18935E+08	148.198	148.082	121.234	120.144	117.971
.22090E+08	149.846	149.731	123.176	122.090	119.932
.25246E+08	151.237	151.122	124.827	123.746	121.602
.28402E+08	152.461	152.346	126.291	125.214	123.083
.31558E+08	153.567	153.453	127.621	126.548	124.430
.63115E+08	160.490	160.379	136.161	135.125	133.105
.94673E+08	163.848	163.741	140.629	139.627	137.682
.12623E+09	165.865	165.760	143.515	142.541	140.659
.15779E+09	167.175	167.073	145.526	144.577	142.748
.18935E+09	167.963	167.863	146.980	146.057	144.280
.22090E+09	168.481	168.383	148.057	147.156	145.423
.25246E+09	168.875	168.780	148.962	148.082	146.390
.28402E+09	168.529	168.436	149.041	148.180	146.525
.31558E+09	168.200	168.108	149.064	148.219	146.596
.63115E+09	161.690	161.615	145.638	144.945	143.599
.94673E+09	153.395	153.332	139.548	138.967	137.827
.12623E+10	144.829	144.776	132.639	132.143	131.158
.15779E+10	137.336	137.290	126.553	126.126	125.268
.18935E+10	131.094	131.054	121.446	121.074	120.316
.22090E+10	125.843	125.808	117.144	116.816	116.140
.25246E+10	120.938	120.906	113.022	112.728	112.120

.28402E+10	117.095	117.066	109.809	109.543	108.987
.31558E+10	113.839	113.813	107.137	106.896	106.387
.63115E+10	97.3936	97.3788	93.3450	93.2092	92.9149
.94673E+10	90.9130	90.9019	87.7982	87.6969	87.4749
.12623E+11	87.2024	87.1933	84.6262	84.5442	84.3626
.15779E+11	84.5478	84.5401	82.3234	82.2534	82.0978
.18935E+11	82.0799	82.0732	80.1293	80.0689	79.9336
.22090E+11	80.0534	80.0475	78.3132	78.2595	78.1395
.25246E+11	78.3092	78.3039	76.7470	76.6995	76.5924
.28402E+11	76.8152	76.8104	75.3966	75.3536	75.2566
.31558E+11	75.5610	75.5567	74.2597	74.2207	74.1322

Temp. Profile from upper center offset to side of WP (90 deg.)

VARIABLE 2 IS AT NODE 3802 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64541.120 TIME= 15:13:50

NSOL command erases all previously stored or calculated data
unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 87 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 6 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 43 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 71 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 22 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 120 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 161 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 252 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 266 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 280 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 209 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 201 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 306 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 397 ITEM= TEMP COMP= NAME= h16i180

VARIABLE 18 IS AT NODE 411 ITEM= TEMP COMP= NAME= c16i180

VARIABLE 19 IS AT NODE 425 ITEM= TEMP COMP= NAME= h16o180

VARIABLE 20 IS AT NODE 354 ITEM= TEMP COMP= NAME= s16o180

VARIABLE 21 IS AT NODE 346 ITEM= TEMP COMP= NAME= t16o180

VARIABLE 22 IS AT NODE 451 ITEM= TEMP COMP= NAME= s22i180

VARIABLE 23 IS AT NODE 542 ITEM= TEMP COMP= NAME= h22i180

VARIABLE 24 IS AT NODE 556 ITEM= TEMP COMP= NAME= c22i180

VARIABLE 25 IS AT NODE 570 ITEM= TEMP COMP= NAME= h22o180

VARIABLE 26 IS AT NODE 499 ITEM= TEMP COMP= NAME= s22o180

VARIABLE 27 IS AT NODE 491 ITEM= TEMP COMP= NAME= t22o180

VARIABLE 28 IS AT NODE 3991 ITEM= TEMP COMP= NAME= i22i180
 VARIABLE 29 IS AT NODE 3981 ITEM= TEMP COMP= NAME= i22o180
 VARIABLE 30 IS AT NODE 4617 ITEM= TEMP COMP= NAME= o22o180
 STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM AT TIME
2	NSOL	3802 TEMP	ts2i180	78.42	.3156E+11	227.1 .1262E+09
3	NSOL	87 TEMP	t02i180	78.42	.3156E+11	227.1 .1262E+09
4	NSOL	6 TEMP	s02i180	78.43	.3156E+11	227.2 .1262E+09
5	NSOL	43 TEMP	h02i180	79.34	.3156E+11	240.3 .9467E+08
6	NSOL	57 TEMP	c02i180	79.81	.3156E+11	247.3 .9467E+08
7	NSOL	71 TEMP	h02o180	79.95	.3156E+11	249.7 .9467E+08
8	NSOL	22 TEMP	s02o180	79.75	.3156E+11	247.5 .9467E+08
9	NSOL	120 TEMP	t02o180	79.75	.3156E+11	247.5 .9467E+08
10	NSOL	161 TEMP	s10i180	79.75	.3156E+11	247.5 .9467E+08
11	NSOL	252 TEMP	h10i180	80.12	.3156E+11	251.3 .9467E+08
12	NSOL	266 TEMP	c10i180	80.16	.3156E+11	251.0 .9467E+08
13	NSOL	280 TEMP	h10o180	79.92	.3156E+11	246.8 .9467E+08
14	NSOL	209 TEMP	s10o180	79.35	.3156E+11	238.3 .9467E+08
15	NSOL	201 TEMP	t10o180	79.35	.3156E+11	238.3 .9467E+08
16	NSOL	306 TEMP	s16i180	79.35	.3156E+11	238.3 .9467E+08
17	NSOL	397 TEMP	h16i180	79.39	.3156E+11	236.6 .9467E+08
18	NSOL	411 TEMP	c16i180	79.11	.3156E+11	230.7 .1262E+09
19	NSOL	425 TEMP	h16o180	78.56	.3156E+11	221.1 .1262E+09
20	NSOL	354 TEMP	s16o180	77.69	.3156E+11	207.2 .1578E+09
21	NSOL	346 TEMP	t16o180	77.69	.3156E+11	207.1 .1578E+09
22	NSOL	451 TEMP	s22i180	77.69	.3156E+11	207.1 .1578E+09
23	NSOL	542 TEMP	h22i180	77.60	.3156E+11	203.8 .1578E+09
24	NSOL	556 TEMP	c22i180	77.22	.3156E+11	196.7 .1578E+09
25	NSOL	570 TEMP	h22o180	76.57	.3156E+11	185.7 .2209E+09
26	NSOL	499 TEMP	s22o180	66.48	.1000E-05	168.6 .2525E+09
27	NSOL	491 TEMP	t22o180	66.37	.1000E-05	168.5 .2525E+09
28	NSOL	3991 TEMP	i22i180	29.31	.1000E-05	148.8 .3156E+09
29	NSOL	3981 TEMP	i22o180	28.35	.1000E-05	148.0 .3156E+09
30	NSOL	4617 TEMP	o22o180	26.14	.1000E-05	146.4 .3156E+09

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 ***** ANSYS -- ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:54 JUN 18, 1995 CP= 64544.850
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3802 TEMP ts2i180	87 TEMP t02i180	6 TEMP s02i180	43 TEMP h02i180	57 TEMP c02i180	71 TEMP h02o180
.10000E-05	139.062	139.073	139.178	158.715	168.731	172.062
.20000E-05	176.854	176.865	176.967	194.359	203.384	206.432
31.558	176.854	176.865	176.967	194.359	203.384	206.432
.31558E+07	201.867	201.878	201.977	217.943	226.228	229.031
.63116E+07	207.515	207.526	207.624	223.280	231.418	234.170
.94673E+07	210.931	210.942	211.038	226.461	234.484	237.200
.12623E+08	213.442	213.453	213.549	228.788	236.721	239.406
.15779E+08	215.404	215.414	215.510	230.594	238.451	241.110
.18935E+08	217.006	217.017	217.111	232.060	239.850	242.485
.22090E+08	218.338	218.348	218.443	233.271	241.000	243.615
.25246E+08	219.423	219.433	219.527	234.247	241.923	244.519
.28402E+08	220.347	220.357	220.450	235.071	242.697	245.277
.31558E+08	221.161	221.172	221.265	235.793	243.371	245.935
.63115E+08	225.602	225.612	225.701	239.546	246.778	249.222

.94673E+08	226.881	226.891	226.977	240.339	247.325	249.683
.12623E+09	227.092	227.102	227.185	240.162	246.950	249.238
.15779E+09	226.856	226.865	226.947	239.607	246.232	248.463
.18935E+09	226.065	226.074	226.153	238.508	244.974	247.149
.22090E+09	225.219	225.228	225.306	237.400	243.731	245.858
.25246E+09	224.345	224.354	224.430	236.284	242.490	244.573
.28402E+09	222.820	222.828	222.902	234.553	240.653	242.698
.31558E+09	221.505	221.514	221.587	233.068	239.079	241.093
.63115E+09	205.840	205.847	205.908	215.838	221.038	222.767
.94673E+09	190.694	190.700	190.752	199.506	204.098	205.613
.12623E+10	176.898	176.903	176.948	184.758	188.858	190.205
.15779E+10	165.106	165.110	165.150	172.134	175.799	176.995
.18935E+10	155.508	155.512	155.546	161.851	165.156	166.225
.22090E+10	147.546	147.549	147.580	153.307	156.308	157.270
.25246E+10	140.434	140.437	140.465	145.703	148.451	149.328
.28402E+10	134.857	134.859	134.885	139.727	142.267	143.075
.31558E+10	130.037	130.040	130.063	134.536	136.882	137.626
.63115E+10	106.762	106.764	106.777	109.540	110.989	111.441
.94673E+10	98.0106	98.0117	98.0221	100.167	101.291	101.639
.12623E+11	93.0244	93.0252	93.0338	94.8140	95.7480	96.0359
.15779E+11	89.5453	89.5461	89.5534	91.0943	91.9026	92.1508
.18935E+11	86.4374	86.4380	86.4444	87.7980	88.5077	88.7248
.22090E+11	83.9239	83.9245	83.9302	85.1384	85.7718	85.9652
.25246E+11	81.7693	81.7698	81.7749	82.8608	83.4300	83.6032
.28402E+11	79.9463	79.9468	79.9514	80.9387	81.4560	81.6131
.31558E+11	78.4243	78.4248	78.4290	79.3354	79.8102	79.9540

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:54 JUN 18, 1995 CP= 64544.870
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	22 TEMP s02o180	120 TEMP t02o180	161 TEMP s10i180	252 TEMP h10i180	266 TEMP c10i180	280 TEMP h10o180
.10000E-05	168.703	168.701	168.718	175.450	175.914	170.949
.20000E-05	203.539	203.537	203.552	209.151	209.215	204.447
31.558	203.539	203.537	203.552	209.150	209.215	204.447
.31558E+07	226.405	226.402	226.416	231.279	231.095	226.479
.63116E+07	231.592	231.589	231.603	236.327	236.098	231.513
.94673E+07	234.654	234.651	234.664	239.292	239.032	234.477
.12623E+08	236.890	236.887	236.900	241.449	241.168	236.639
.15779E+08	238.619	238.616	238.629	243.114	242.816	238.312
.18935E+08	240.016	240.013	240.026	244.456	244.145	239.663
.22090E+08	241.165	241.163	241.175	245.557	245.236	240.774
.25246E+08	242.086	242.084	242.096	246.436	246.106	241.664
.28402E+08	242.859	242.856	242.869	247.171	246.834	242.411
.31558E+08	243.532	243.529	243.541	247.809	247.466	243.061
.63115E+08	246.922	246.919	246.931	250.962	250.591	246.338
.94673E+08	247.454	247.451	247.462	251.344	250.969	246.839
.12623E+09	247.064	247.062	247.073	250.842	250.471	246.449
.15779E+09	246.334	246.332	246.342	250.024	249.660	245.729
.18935E+09	245.064	245.061	245.071	248.672	248.319	244.482
.22090E+09	243.810	243.807	243.817	247.350	247.008	243.252
.25246E+09	242.559	242.556	242.566	246.037	245.706	242.024
.28402E+09	240.713	240.710	240.720	244.144	243.828	240.215
.31558E+09	239.131	239.129	239.138	242.524	242.220	238.665
.63115E+09	221.029	221.027	221.035	224.072	223.887	220.871
.94673E+09	204.039	204.038	204.045	206.824	206.728	204.117
.12623E+10	188.775	188.773	188.780	191.336	191.305	189.013
.15779E+10	175.687	175.686	175.692	178.042	178.056	176.034
.18935E+10	165.018	165.017	165.022	167.194	167.240	165.436
.22090E+10	156.151	156.150	156.155	158.166	158.232	156.607
.25246E+10	148.289	148.288	148.293	150.162	150.240	148.764

.28402E+10	142.107	142.106	142.110	143.857	143.941	142.585
.31558E+10	136.726	136.725	136.729	138.357	138.445	137.199
.63115E+10	110.861	110.861	110.863	111.917	112.003	111.253
.94673E+10	101.181	101.181	101.183	102.015	102.091	101.513
.12623E+11	95.6521	95.6518	95.6532	96.3504	96.4165	95.9384
.15779E+11	91.8159	91.8157	91.8170	92.4243	92.4836	92.0708
.18935E+11	88.4285	88.4283	88.4294	88.9660	89.0200	88.6581
.22090E+11	85.6995	85.6994	85.7003	86.1811	86.2303	85.9078
.25246E+11	83.3631	83.3630	83.3639	83.7978	83.8431	83.5536
.28402E+11	81.3939	81.3938	81.3946	81.7904	81.8323	81.5696
.31558E+11	79.7520	79.7519	79.7526	80.1171	80.1563	79.9153

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:54 JUN 18, 1995 CP= 64544.880
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	209 TEMP s10o180	201 TEMP t10o180	306 TEMP s16i180	397 TEMP h16i180	411 TEMP c16i180	425 TEMP h16o180
.10000E-05	159.461	159.424	159.408	159.336	152.841	140.501
.20000E-05	193.929	193.892	193.873	192.964	186.393	174.662
31.558	193.929	193.892	193.873	192.964	186.392	174.662
.31558E+07	216.612	216.575	216.555	215.179	208.627	197.334
.63116E+07	221.781	221.744	221.724	220.269	213.737	202.560
.94673E+07	224.851	224.814	224.794	223.290	216.782	205.704
.12623E+08	227.102	227.064	227.044	225.504	219.022	208.027
.15779E+08	228.849	228.811	228.791	227.225	220.768	209.846
.18935E+08	230.267	230.230	230.209	228.623	222.190	211.335
.22090E+08	231.437	231.400	231.380	229.778	223.369	212.576
.25246E+08	232.381	232.345	232.324	230.711	224.325	213.589
.28402E+08	233.179	233.143	233.122	231.500	225.138	214.455
.31558E+08	233.878	233.841	233.821	232.191	225.851	215.221
.63115E+08	237.528	237.493	237.473	235.824	229.685	219.466
.94673E+08	238.310	238.275	238.256	236.629	230.666	220.770
.12623E+09	238.151	238.117	238.098	236.504	230.698	221.076
.15779E+09	237.624	237.592	237.573	236.014	230.343	220.952
.18935E+09	236.568	236.536	236.518	235.003	229.471	220.312
.22090E+09	235.502	235.471	235.454	233.977	228.568	219.608
.25246E+09	234.427	234.397	234.380	232.941	227.645	218.871
.28402E+09	232.752	232.723	232.706	231.310	226.122	217.515
.31558E+09	231.315	231.286	231.269	229.910	224.811	216.345
.63115E+09	214.553	214.529	214.516	213.513	209.256	202.087
.94673E+09	198.572	198.552	198.541	197.804	194.181	188.000
.12623E+10	184.092	184.075	184.066	183.531	180.408	175.001
.15779E+10	171.645	171.630	171.623	171.249	168.544	163.791
.18935E+10	161.481	161.468	161.462	161.204	158.828	154.595
.22090E+10	153.017	153.006	153.000	152.822	150.708	146.903
.25246E+10	145.484	145.474	145.469	145.346	143.446	139.998
.28402E+10	139.558	139.549	139.545	139.460	137.728	134.564
.31558E+10	134.405	134.397	134.393	134.338	132.758	129.854
.63115E+10	109.534	109.529	109.527	109.567	108.652	106.913
.94673E+10	100.179	100.176	100.174	100.226	99.5316	98.1958
.12623E+11	94.8307	94.8277	94.8265	94.8780	94.3078	93.2045
.15779E+11	91.1113	91.1088	91.1077	91.1580	90.6688	89.7171
.18935E+11	87.8150	87.8128	87.8119	87.8607	87.4344	86.6012
.22090E+11	85.1551	85.1531	85.1524	85.1987	84.8202	84.0782
.25246E+11	82.8769	82.8752	82.8745	82.9188	82.5806	81.9153
.28402E+11	80.9542	80.9526	80.9520	80.9944	80.6884	80.0847
.31558E+11	79.3502	79.3487	79.3482	79.3886	79.1090	78.5557

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:54 JUN 18, 1995 CP= 64544.900

FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	354 TEMP s16o180	346 TEMP t16o180	451 TEMP s22i180	542 TEMP h22i180	556 TEMP c22i180	570 TEMP h22o180
.10000E-05	120.866	120.806	120.770	118.134	108.943	93.0567
.20000E-05	156.572	156.512	156.475	153.319	144.454	129.639
31.558	156.572	156.512	156.475	153.319	144.454	129.639
.31558E+07	180.304	180.243	180.204	176.732	168.153	154.098
.63116E+07	185.757	185.696	185.658	182.143	173.636	159.770
.94673E+07	189.089	189.028	188.989	185.449	177.005	163.290
.12623E+08	191.567	191.507	191.468	187.915	179.526	165.937
.15779E+08	193.522	193.462	193.423	189.863	181.524	168.043
.18935E+08	195.134	195.074	195.035	191.472	183.180	169.796
.22090E+08	196.487	196.427	196.389	192.825	184.576	171.281
.25246E+08	197.602	197.543	197.504	193.942	185.735	172.521
.28402E+08	198.565	198.505	198.467	194.909	186.741	173.604
.31558E+08	199.422	199.363	199.325	195.771	187.641	174.577
.63115E+08	204.367	204.310	204.273	200.793	192.978	180.487
.94673E+08	206.191	206.135	206.099	202.707	195.146	183.092
.12623E+09	206.922	206.868	206.833	203.525	196.182	184.492
.15779E+09	207.152	207.100	207.066	203.835	196.677	185.291
.18935E+09	206.862	206.811	206.778	203.631	196.659	185.575
.22090E+09	206.456	206.406	206.374	203.301	196.489	185.664
.25246E+09	205.995	205.946	205.915	202.911	196.248	185.663
.28402E+09	204.882	204.834	204.803	201.869	195.342	184.970
.31558E+09	203.913	203.866	203.836	200.960	194.547	184.353
.63115E+09	191.521	191.482	191.458	189.140	183.783	175.220
.94673E+09	178.857	178.825	178.805	176.915	172.349	164.998
.12623E+10	166.948	166.920	166.903	165.348	161.391	154.966
.15779E+10	156.665	156.642	156.627	155.335	151.879	146.227
.18935E+10	148.216	148.195	148.183	147.081	144.019	138.994
.22090E+10	141.157	141.139	141.128	140.173	137.436	132.926
.25246E+10	134.774	134.758	134.748	133.911	131.440	127.353
.28402E+10	129.757	129.742	129.733	128.987	126.727	122.978
.31558E+10	125.431	125.417	125.409	124.742	122.673	119.233
.63115E+10	104.233	104.225	104.220	103.879	102.663	100.608
.94673E+10	96.1299	96.1240	96.1207	95.8725	94.9443	93.3702
.12623E+11	91.4943	91.4895	91.4868	91.2892	90.5257	89.2273
.15779E+11	88.2396	88.2355	88.2332	88.0676	87.4112	86.2922
.18935E+11	85.3055	85.3019	85.2999	85.1589	84.5858	83.6065
.22090E+11	82.9227	82.9196	82.9178	82.7944	82.2847	81.4126
.25246E+11	80.8779	80.8751	80.8735	80.7652	80.3091	79.5274
.28402E+11	79.1425	79.1399	79.1385	79.0420	78.6289	77.9198
.31558E+11	77.6914	77.6890	77.6877	77.6008	77.2227	76.5730

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:54 JUN 18, 1995 CP= 64544.910
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	499 TEMP s22o180	491 TEMP t22o180	3991 TEMP i22i180	3981 TEMP i22o180	4617 TEMP o22o180
.10000E-05	66.4824	66.3741	29.3072	28.3491	26.1414
.20000E-05	105.102	104.987	72.4744	71.4203	69.1907
31.558	105.102	104.987	72.4744	71.4203	69.1907
.31558E+07	130.980	130.863	101.502	100.402	98.1873
.63116E+07	136.993	136.876	108.280	107.179	104.990

.94673E+07	140.797	140.681	112.654	111.554	109.385
.12623E+08	143.674	143.558	115.977	114.881	112.733
.15779E+08	145.982	145.866	118.661	117.568	115.439
.18935E+08	147.917	147.802	120.926	119.836	117.724
.22090E+08	149.568	149.452	122.871	121.785	119.687
.25246E+08	150.958	150.843	124.522	123.441	121.356
.28402E+08	152.182	152.068	125.986	124.909	122.838
.31558E+08	153.290	153.175	127.318	126.245	124.186
.63115E+08	160.221	160.110	135.870	134.834	132.871
.94673E+08	163.586	163.479	140.348	139.346	137.456
.12623E+09	165.609	165.504	143.241	142.268	140.440
.15779E+09	166.924	166.822	145.259	144.310	142.533
.18935E+09	167.716	167.617	146.718	145.795	144.069
.22090E+09	168.238	168.141	147.800	146.899	145.217
.25246E+09	168.636	168.541	148.710	147.829	146.187
.28402E+09	168.295	168.202	148.795	147.934	146.327
.31558E+09	167.970	167.879	148.823	147.978	146.402
.63115E+09	161.491	161.416	145.432	144.738	143.434
.94673E+09	153.219	153.156	139.367	138.786	137.681
.12623E+10	144.674	144.621	132.480	131.984	131.030
.15779E+10	137.196	137.150	126.410	125.984	125.154
.18935E+10	130.967	130.927	121.317	120.944	120.213
.22090E+10	125.726	125.690	117.026	116.697	116.045
.25246E+10	120.831	120.799	112.913	112.620	112.033
.28402E+10	116.995	116.966	109.708	109.442	108.906
.31558E+10	113.744	113.718	107.042	106.801	106.311
.63115E+10	97.3324	97.3175	93.2839	93.1481	92.8659
.94673E+10	90.8638	90.8527	87.7493	87.6480	87.4357
.12623E+11	87.1603	87.1513	84.5845	84.5025	84.3292
.15779E+11	84.5110	84.5033	82.2869	82.2168	82.0685
.18935E+11	82.0476	82.0409	80.0973	80.0368	79.9079
.22090E+11	80.0245	80.0186	78.2845	78.2309	78.1165
.25246E+11	78.2830	78.2777	76.7210	76.6736	76.5716
.28402E+11	76.7911	76.7863	75.3727	75.3297	75.2375
.31558E+11	75.5386	75.5342	74.2375	74.1985	74.1144

 * Temperature Profile from center to upper right (135 deg.) *

VARIABLE 2 IS AT NODE 3526 ITEM= TEMP COMP= NAME= ts2i135

*** WARNING *** CP= 64545.070 TIME= 15:13:55
 NSQL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 82 ITEM= TEMP COMP= NAME= t02i135

VARIABLE 4 IS AT NODE 1 ITEM= TEMP COMP= NAME= s02i135

VARIABLE 5 IS AT NODE 41 ITEM= TEMP COMP= NAME= h02i135

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i135

VARIABLE 7 IS AT NODE 73 ITEM= TEMP COMP= NAME= h02o135

VARIABLE 8 IS AT NODE 10 ITEM= TEMP COMP= NAME= s02o135

VARIABLE 9 IS AT NODE 116 ITEM= TEMP COMP= NAME= t02o135

VARIABLE 10 IS AT NODE 1607 ITEM= TEMP COMP= NAME= s12i135

VARIABLE 11 IS AT NODE 1700 ITEM= TEMP COMP= NAME= h12i135

VARIABLE 12 IS AT NODE 1716 ITEM= TEMP COMP= NAME= c12i135

VARIABLE 13 IS AT NODE 1732 ITEM= TEMP COMP= NAME= h12o135

VARIABLE 14 IS AT NODE 1655 ITEM= TEMP COMP= NAME= s12o135

VARIABLE 15 IS AT NODE 1647 ITEM= TEMP COMP= NAME= t12o135
 VARIABLE 16 IS AT NODE 2477 ITEM= TEMP COMP= NAME= s20i135
 VARIABLE 17 IS AT NODE 2570 ITEM= TEMP COMP= NAME= h20i135
 VARIABLE 18 IS AT NODE 2586 ITEM= TEMP COMP= NAME= c20i135
 VARIABLE 19 IS AT NODE 2602 ITEM= TEMP COMP= NAME= h20o135
 VARIABLE 20 IS AT NODE 2525 ITEM= TEMP COMP= NAME= s20o135
 VARIABLE 21 IS AT NODE 2517 ITEM= TEMP COMP= NAME= t20o135
 VARIABLE 22 IS AT NODE 3956 ITEM= TEMP COMP= NAME= i20o135
 VARIABLE 23 IS AT NODE 4591 ITEM= TEMP COMP= NAME= o20o135
 Add centers of assemblies 13 and 17
 VARIABLE 24 IS AT NODE 2441 ITEM= TEMP COMP= NAME= c14i135
 VARIABLE 25 IS AT NODE 1861 ITEM= TEMP COMP= NAME= c18i135
 STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL	3526 TEMP	ts2i135	78.45	.3156E+11	227.5	.1262E+09
3	NSOL	82 TEMP	t02i135	78.45	.3156E+11	227.5	.1262E+09
4	NSOL	1 TEMP	s02i135	78.45	.3156E+11	227.5	.1262E+09
5	NSOL	41 TEMP	h02i135	79.06	.3156E+11	236.3	.9467E+08
6	NSOL	57 TEMP	c02i135	79.81	.3156E+11	247.3	.9467E+08
7	NSOL	73 TEMP	h02o135	80.22	.3156E+11	253.7	.9467E+08
8	NSOL	10 TEMP	s02o135	80.37	.3156E+11	256.3	.9467E+08
9	NSOL	116 TEMP	t02o135	80.39	.3156E+11	256.5	.9467E+08
10	NSOL	1607 TEMP	s12i135	80.41	.3156E+11	256.7	.9467E+08
11	NSOL	1700 TEMP	h12i135	80.92	.3156E+11	262.2	.6312E+08
12	NSOL	1716 TEMP	c12i135	81.02	.3156E+11	261.6	.6312E+08
13	NSOL	1732 TEMP	h12o135	80.50	.3156E+11	252.5	.9467E+08
14	NSOL	1655 TEMP	s12o135	79.58	.3156E+11	237.0	.9467E+08
15	NSOL	1647 TEMP	t12o135	79.54	.3156E+11	236.3	.9467E+08
16	NSOL	2477 TEMP	s20i135	79.51	.3156E+11	235.5	.9467E+08
17	NSOL	2570 TEMP	h20i135	78.86	.3156E+11	222.5	.1262E+09
18	NSOL	2586 TEMP	c20i135	77.77	.3156E+11	203.6	.1578E+09
19	NSOL	2602 TEMP	h20o135	76.13	.3156E+11	177.5	.2525E+09
20	NSOL	2525 TEMP	s20o135	35.53	.1000E-05	151.2	.2840E+09
21	NSOL	2517 TEMP	t20o135	34.03	.1000E-05	150.5	.2840E+09
22	NSOL	3956 TEMP	i20o135	29.46	.1000E-05	148.0	.3156E+09
23	NSOL	4591 TEMP	o20o135	26.14	.1000E-05	146.1	.3156E+09
24	NSOL	2441 TEMP	c14i135	79.41	.3156E+11	231.5	.9467E+08
25	NSOL	1861 TEMP	c18i135	79.39	.3156E+11	231.3	.9467E+08
26	NSOL	499 TEMP	s22o180	66.48	.1000E-05	168.6	.2525E+09
27	NSOL	491 TEMP	t22o180	66.37	.1000E-05	168.5	.2525E+09
28	NSOL	3991 TEMP	i22i180	29.31	.1000E-05	148.8	.3156E+09
29	NSOL	3981 TEMP	i22o180	28.35	.1000E-05	148.0	.3156E+09
30	NSOL	4617 TEMP	o22o180	26.14	.1000E-05	146.4	.3156E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:58 JUN 18, 1995 CP= 64548.180
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME 3526 TEMP 82 TEMP 1 TEMP 41 TEMP 57 TEMP 73 TEMP

	ts2i135	t02i135	s02i135	h02i135	c02i135	h02o135
.10000E-05	139.404	139.405	139.411	152.796	168.731	177.939
.20000E-05	177.199	177.199	177.205	189.074	203.384	211.735
31.558	177.199	177.199	177.205	189.074	203.384	211.734
.31558E+07	202.342	202.333	202.335	213.156	226.228	233.853
.63116E+07	207.990	207.980	207.983	218.586	231.418	238.905
.94673E+07	211.403	211.394	211.396	221.837	234.484	241.869
.12623E+08	213.912	213.903	213.905	224.219	236.721	244.023
.15779E+08	215.871	215.862	215.864	226.072	238.451	245.682
.18935E+08	217.471	217.462	217.465	227.579	239.850	247.018
.22090E+08	218.801	218.792	218.794	228.825	241.000	248.113
.25246E+08	219.884	219.875	219.878	229.834	241.923	248.985
.28402E+08	220.807	220.798	220.800	230.688	242.697	249.712
.31558E+08	221.620	221.611	221.613	231.438	243.371	250.343
.63115E+08	226.044	226.036	226.038	235.396	246.778	253.423
.94673E+08	227.310	227.301	227.303	236.334	247.325	253.736
.12623E+09	227.509	227.501	227.503	236.272	246.950	253.173
.15779E+09	227.263	227.255	227.257	235.812	246.232	252.301
.18935E+09	226.462	226.454	226.456	234.804	244.974	250.893
.22090E+09	225.608	225.600	225.602	233.774	243.731	249.522
.25246E+09	224.726	224.718	224.720	232.729	242.490	248.162
.28402E+09	223.192	223.184	223.186	231.059	240.653	246.224
.31558E+09	221.871	221.863	221.865	229.624	239.079	244.567
.63115E+09	206.146	206.139	206.141	212.856	221.038	225.760
.94673E+09	190.955	190.949	190.951	196.873	204.098	208.246
.12623E+10	177.123	177.118	177.119	182.406	188.858	192.556
.15779E+10	165.303	165.299	165.299	170.031	175.799	179.091
.18935E+10	155.683	155.679	155.679	159.953	165.156	168.107
.22090E+10	147.703	147.699	147.699	151.584	156.308	158.972
.25246E+10	140.576	140.572	140.573	144.126	148.451	150.883
.28402E+10	134.987	134.984	134.984	138.269	142.267	144.510
.31558E+10	130.158	130.155	130.155	133.190	136.882	138.951
.63115E+10	106.835	106.833	106.833	108.709	110.989	112.253
.94673E+10	98.0670	98.0654	98.0655	99.5217	101.291	102.267
.12623E+11	93.0716	93.0702	93.0702	94.2790	95.7480	96.5563
.15779E+11	89.5862	89.5850	89.5850	90.6315	91.9026	92.6004
.18935E+11	86.4732	86.4721	86.4722	87.3915	88.5077	89.1188
.22090E+11	83.9558	83.9549	83.9549	84.7757	85.7718	86.3165
.25246E+11	81.7980	81.7972	81.7972	82.5349	83.4300	83.9183
.28402E+11	79.9725	79.9717	79.9717	80.6426	81.4560	81.8993
.31558E+11	78.4485	78.4478	78.4478	79.0636	79.8102	80.2163

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:58 JUN 18, 1995 CP= 64548.190
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	10 TEMP s02o135	116 TEMP t02o135	1607 TEMP s12i135	1700 TEMP h12i135	1716 TEMP c12i135	1732 TEMP h12o135
.10000E-05	182.226	182.619	182.987	192.563	194.134	184.166
.20000E-05	215.435	215.769	216.080	224.085	224.674	214.692
31.558	215.435	215.769	216.080	224.084	224.674	214.691
.31558E+07	237.087	237.378	237.649	244.552	244.467	234.538
.63116E+07	242.054	242.338	242.601	249.307	249.108	239.192
.94673E+07	244.952	245.230	245.487	252.049	251.772	241.892
.12623E+08	247.058	247.332	247.585	254.030	253.698	243.855
.15779E+08	248.677	248.947	249.197	255.547	255.171	245.365
.18935E+08	249.978	250.245	250.491	256.759	256.349	246.579
.22090E+08	251.041	251.305	251.549	257.745	257.306	247.571
.25246E+08	251.885	252.147	252.388	258.521	258.058	248.358
.28402E+08	252.587	252.846	253.085	259.162	258.679	249.012
.31558E+08	253.193	253.451	253.688	259.712	259.211	249.578

.63115E+08	256.102	256.345	256.568	262.240	261.647	252.303
.94673E+08	256.301	256.534	256.749	262.202	261.582	252.483
.12623E+09	255.650	255.876	256.083	261.375	260.751	251.868
.15779E+09	254.707	254.927	255.129	260.295	259.675	250.979
.18935E+09	253.232	253.446	253.644	258.694	258.090	249.586
.22090E+09	251.805	252.015	252.208	257.164	256.575	248.238
.25246E+09	250.394	250.599	250.789	255.657	255.085	246.905
.28402E+09	248.415	248.617	248.804	253.608	253.062	245.030
.31558E+09	246.722	246.922	247.106	251.857	251.333	243.427
.63115E+09	227.611	227.787	227.949	232.204	231.913	225.205
.94673E+09	209.875	210.033	210.179	214.066	213.956	208.158
.12623E+10	194.015	194.159	194.292	197.881	197.905	192.820
.15779E+10	180.395	180.525	180.646	183.938	184.051	179.579
.18935E+10	169.273	169.392	169.503	172.537	172.709	168.728
.22090E+10	160.018	160.127	160.228	163.033	163.243	159.666
.25246E+10	151.832	151.933	152.026	154.636	154.874	151.631
.28402E+10	145.387	145.480	145.567	148.009	148.261	145.283
.31558E+10	139.759	139.845	139.926	142.203	142.459	139.726
.63115E+10	112.746	112.800	112.852	114.326	114.559	112.927
.94673E+10	102.646	102.689	102.729	103.893	104.095	102.842
.12623E+11	96.8689	96.9046	96.9381	97.9136	98.0908	97.0549
.15779E+11	92.8696	92.9005	92.9296	93.7791	93.9378	93.0448
.18935E+11	89.3541	89.3813	89.4069	90.1570	90.3012	89.5199
.22090E+11	86.5257	86.5500	86.5730	87.2451	87.3765	86.6813
.25246E+11	84.1056	84.1275	84.1481	84.7543	84.8752	84.2520
.28402E+11	82.0686	82.0886	82.1074	82.6604	82.7722	82.2071
.31558E+11	80.3713	80.3896	80.4069	80.9157	81.0200	80.5021

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:58 JUN 18, 1995 CP= 64548.210
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	1655 TEMP s12o135	1647 TEMP t12o135	2477 TEMP s20i135	2570 TEMP h20i135	2586 TEMP c20i135	2602 TEMP h20o135
.10000E-05	165.514	164.688	163.836	149.018	123.960	83.2207
.20000E-05	196.688	195.876	195.038	180.227	156.444	119.490
31.558	196.689	195.876	195.038	180.227	156.444	119.490
.31558E+07	217.123	216.327	215.506	200.863	178.046	143.614
.63116E+07	221.904	221.112	220.296	205.729	183.154	149.344
.94673E+07	224.727	223.941	223.130	208.646	186.276	152.941
.12623E+08	226.798	226.017	225.210	210.799	188.609	155.658
.15779E+08	228.406	227.628	226.826	212.482	190.451	157.828
.18935E+08	229.708	228.934	228.136	213.858	191.972	159.639
.22090E+08	230.784	230.014	229.219	215.003	193.251	161.178
.25246E+08	231.647	230.880	230.090	215.933	194.305	162.466
.28402E+08	232.375	231.611	230.824	216.726	195.215	163.594
.31558E+08	233.012	232.252	231.468	217.426	196.028	164.612
.63115E+08	236.321	235.586	234.829	221.268	200.762	170.891
.94673E+08	236.971	236.257	235.523	222.363	202.540	173.799
.12623E+09	236.757	236.063	235.348	222.538	203.285	175.460
.15779E+09	236.210	235.532	234.834	222.324	203.550	176.482
.18935E+09	235.163	234.501	233.820	221.617	203.321	176.991
.22090E+09	234.114	233.467	232.801	220.864	202.976	177.275
.25246E+09	233.060	232.426	231.773	220.084	202.575	177.454
.28402E+09	231.441	230.819	230.179	218.719	201.549	176.932
.31558E+09	230.050	229.439	228.809	217.542	200.654	176.456
.63115E+09	213.808	213.291	212.760	203.298	189.031	168.627
.94673E+09	198.259	197.815	197.359	189.271	177.000	159.383
.12623E+10	184.110	183.724	183.326	176.317	165.590	150.096
.15779E+10	171.882	171.543	171.195	165.093	155.664	141.976
.18935E+10	161.852	161.552	161.243	155.858	147.457	135.236
.22090E+10	153.469	153.201	152.924	148.120	140.577	129.572

.25246E+10	145.999	145.756	145.507	141.178	134.341	124.333
.28402E+10	140.106	139.884	139.655	135.702	129.427	120.221
.31558E+10	134.967	134.763	134.554	130.940	125.181	116.714
.63115E+10	110.056	109.935	109.811	107.700	104.259	99.1408
.94673E+10	100.630	100.538	100.444	98.8377	96.1966	92.2577
.12623E+11	95.2253	95.1496	95.0717	93.7524	91.5735	88.3159
.15779E+11	91.4653	91.4001	91.3330	90.2008	88.3234	85.5107
.18935E+11	88.1366	88.0797	88.0211	87.0343	85.3921	82.9266
.22090E+11	85.4489	85.3983	85.3463	84.4701	83.0080	80.8095
.25246E+11	83.1468	83.1015	83.0549	82.2719	80.9618	78.9887
.28402E+11	81.2038	81.1628	81.1206	80.4123	79.2242	77.4326
.31558E+11	79.5826	79.5450	79.5064	78.8587	77.7704	76.1273

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:13:58 JUN 18, 1995 CP= 64548.220
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	2525 TEMP s20o135	2517 TEMP t20o135	3956 TEMP i20o135	4591 TEMP o20o135	2441 TEMP c14i135	1861 TEMP c18i135
.10000E-05	35.5308	34.0306	29.4560	26.1414	160.478	160.478
.20000E-05	77.6536	76.3435	72.2104	69.1674	191.082	191.074
31.558	77.6535	76.3434	72.2104	69.1674	191.082	191.074
.31558E+07	105.584	104.396	100.574	97.6998	211.350	211.178
.63116E+07	112.208	111.050	107.315	104.506	216.094	215.921
.94673E+07	116.478	115.342	111.670	108.907	218.908	218.736
.12623E+08	119.721	118.603	114.983	112.261	220.977	220.806
.15779E+08	122.339	121.235	117.659	114.973	222.588	222.418
.18935E+08	124.545	123.455	119.918	117.262	223.898	223.729
.22090E+08	126.437	125.359	121.860	119.231	224.982	224.815
.25246E+08	128.041	126.974	123.509	120.904	225.857	225.691
.28402E+08	129.460	128.403	124.969	122.386	226.599	226.432
.31558E+08	130.752	129.704	126.299	123.737	227.249	227.083
.63115E+08	139.028	138.046	134.853	132.444	230.701	230.540
.94673E+08	143.330	142.394	139.347	137.045	231.496	231.338
.12623E+09	146.092	145.191	142.259	140.042	231.418	231.264
.15779E+09	148.006	147.134	144.294	142.145	230.992	230.840
.18935E+09	149.369	148.524	145.773	143.690	230.074	229.925
.22090E+09	150.373	149.550	146.873	144.846	229.139	228.991
.25246E+09	151.210	150.408	147.798	145.822	228.190	228.045
.28402E+09	151.243	150.458	147.905	145.972	226.674	226.532
.31558E+09	151.227	150.456	147.951	146.053	225.370	225.230
.63115E+09	147.461	146.815	144.718	143.135	209.965	209.842
.94673E+09	141.136	140.579	138.774	137.417	195.051	194.939
.12623E+10	134.060	133.570	131.984	130.796	181.409	181.309
.15779E+10	127.822	127.389	125.989	124.943	169.606	169.515
.18935E+10	122.590	122.203	120.952	120.020	159.901	159.817
.22090E+10	118.179	117.829	116.705	115.867	151.769	151.691
.25246E+10	113.969	113.651	112.630	111.869	144.493	144.421
.28402E+10	110.683	110.390	109.452	108.753	138.753	138.685
.31558E+10	107.941	107.671	106.809	106.167	133.748	133.684
.63115E+10	93.8360	93.6727	93.1540	92.7712	109.400	109.357
.94673E+10	88.1750	88.0493	87.6516	87.3591	100.151	100.115
.12623E+11	84.9370	84.8330	84.5047	84.2636	94.8391	94.8086
.15779E+11	82.5920	82.5020	82.2185	82.0107	91.1394	91.1125
.18935E+11	80.3660	80.2870	80.0389	79.8571	87.8570	87.8333
.22090E+11	78.5250	78.4545	78.2330	78.0709	85.2034	85.1822
.25246E+11	76.9370	76.8737	76.6753	76.5300	82.9301	82.9107
.28402E+11	75.5689	75.5115	75.3310	75.1992	81.0099	80.9920
.31558E+11	74.4171	74.3644	74.1992	74.0785	79.4070	79.3902

 Temperature Profile from center offset to top of WP (180 deg.)

VARIABLE 2 IS AT NODE 3544 ITEM= TEMP COMP= NAME= ts2i180

*** WARNING *** CP= 64548.370 TIME= 15:13:58
 NSOL command erases all previously stored or calculated data
 unless STORE,MERGE is used.

VARIABLE 3 IS AT NODE 104 ITEM= TEMP COMP= NAME= t02i180

VARIABLE 4 IS AT NODE 29 ITEM= TEMP COMP= NAME= s02i180

VARIABLE 5 IS AT NODE 55 ITEM= TEMP COMP= NAME= h02i180

VARIABLE 6 IS AT NODE 57 ITEM= TEMP COMP= NAME= c02i180

VARIABLE 7 IS AT NODE 59 ITEM= TEMP COMP= NAME= h02o180

VARIABLE 8 IS AT NODE 14 ITEM= TEMP COMP= NAME= s02o180

VARIABLE 9 IS AT NODE 135 ITEM= TEMP COMP= NAME= t02o180

VARIABLE 10 IS AT NODE 620 ITEM= TEMP COMP= NAME= s10i180

VARIABLE 11 IS AT NODE 699 ITEM= TEMP COMP= NAME= h10i180

VARIABLE 12 IS AT NODE 701 ITEM= TEMP COMP= NAME= c10i180

VARIABLE 13 IS AT NODE 703 ITEM= TEMP COMP= NAME= h10o180

VARIABLE 14 IS AT NODE 666 ITEM= TEMP COMP= NAME= s10o180

VARIABLE 15 IS AT NODE 659 ITEM= TEMP COMP= NAME= t10o180

VARIABLE 16 IS AT NODE 765 ITEM= TEMP COMP= NAME= s16i180

VARIABLE 17 IS AT NODE 844 ITEM= TEMP COMP= NAME= h16i180

VARIABLE 18 IS AT NODE 846 ITEM= TEMP COMP= NAME= c16i180

VARIABLE 19 IS AT NODE 848 ITEM= TEMP COMP= NAME= h16o180

VARIABLE 20 IS AT NODE 811 ITEM= TEMP COMP= NAME= s16o180

VARIABLE 21 IS AT NODE 804 ITEM= TEMP COMP= NAME= t16o180

VARIABLE 22 IS AT NODE 910 ITEM= TEMP COMP= NAME= s22i180

VARIABLE 23 IS AT NODE 989 ITEM= TEMP COMP= NAME= h22i180

VARIABLE 24 IS AT NODE 991 ITEM= TEMP COMP= NAME= c22i180

VARIABLE 25 IS AT NODE 993 ITEM= TEMP COMP= NAME= h22o180

VARIABLE 26 IS AT NODE 956 ITEM= TEMP COMP= NAME= s22o180

VARIABLE 27 IS AT NODE 949 ITEM= TEMP COMP= NAME= t22o180

VARIABLE 28 IS AT NODE 4028 ITEM= TEMP COMP= NAME= i22i180

VARIABLE 29 IS AT NODE 3931 ITEM= TEMP COMP= NAME= i22o180

VARIABLE 30 IS AT NODE 4565 ITEM= TEMP COMP= NAME= o22o180

STORAGE COMPLETE FOR 40 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2 NSOL 3544 TEMP ts2i180 78.43 .3156E+11 227.2 .1262E+09

3	NSOL	104	TEMP	t02i180	78.43	.3156E+11	227.2	.1262E+09
4	NSOL	29	TEMP	s02i180	78.44	.3156E+11	227.3	.1262E+09
5	NSOL	55	TEMP	h02i180	79.34	.3156E+11	240.4	.9467E+08
6	NSOL	57	TEMP	c02i180	79.81	.3156E+11	247.3	.9467E+08
7	NSOL	59	TEMP	h02o180	79.95	.3156E+11	249.6	.9467E+08
8	NSOL	14	TEMP	s02o180	79.74	.3156E+11	247.4	.9467E+08
9	NSOL	135	TEMP	t02o180	79.74	.3156E+11	247.4	.9467E+08
10	NSOL	620	TEMP	s10i180	79.74	.3156E+11	247.4	.9467E+08
11	NSOL	699	TEMP	h10i180	80.10	.3156E+11	251.2	.9467E+08
12	NSOL	701	TEMP	c10i180	80.14	.3156E+11	250.8	.9467E+08
13	NSOL	703	TEMP	h10o180	79.89	.3156E+11	246.6	.9467E+08
14	NSOL	666	TEMP	s10o180	79.33	.3156E+11	238.1	.9467E+08
15	NSOL	659	TEMP	t10o180	79.32	.3156E+11	238.0	.9467E+08
16	NSOL	765	TEMP	s16i180	79.32	.3156E+11	238.0	.9467E+08
17	NSOL	844	TEMP	h16i180	79.36	.3156E+11	236.3	.9467E+08
18	NSOL	846	TEMP	c16i180	79.08	.3156E+11	230.4	.1262E+09
19	NSOL	848	TEMP	h16o180	78.52	.3156E+11	220.7	.1262E+09
20	NSOL	811	TEMP	s16o180	77.65	.3156E+11	206.8	.1578E+09
21	NSOL	804	TEMP	t16o180	77.65	.3156E+11	206.7	.1578E+09
22	NSOL	910	TEMP	s22i180	77.65	.3156E+11	206.7	.1578E+09
23	NSOL	989	TEMP	h22i180	77.56	.3156E+11	203.4	.1578E+09
24	NSOL	991	TEMP	c22i180	77.17	.3156E+11	196.2	.1578E+09
25	NSOL	993	TEMP	h22o180	76.52	.3156E+11	185.2	.2525E+09
26	NSOL	956	TEMP	s22o180	66.48	.1000E-05	168.1	.2525E+09
27	NSOL	949	TEMP	t22o180	66.37	.1000E-05	168.0	.2525E+09
28	NSOL	4028	TEMP	i22i180	29.31	.1000E-05	148.2	.3156E+09
29	NSOL	3931	TEMP	i22o180	28.35	.1000E-05	147.3	.3156E+09
30	NSOL	4565	TEMP	o22o180	26.14	.1000E-05	145.7	.3156E+09

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:02 JUN 18, 1995 CP= 64552.190
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	3544 TEMP ts2i180	104 TEMP t02i180	29 TEMP s02i180	55 TEMP h02i180	57 TEMP c02i180	59 TEMP h02o180
.10000E-05	139.062	139.073	139.178	158.715	168.731	172.062
.20000E-05	176.858	176.869	176.971	194.362	203.384	206.430
31.558	176.859	176.870	176.972	194.362	203.384	206.430
.31558E+07	201.980	201.991	202.089	217.995	226.228	228.981
.63116E+07	207.628	207.639	207.736	223.333	231.418	234.121
.94673E+07	211.042	211.053	211.150	226.513	234.484	237.151
.12623E+08	213.553	213.564	213.659	228.839	236.721	239.357
.15779E+08	215.514	215.524	215.619	230.645	238.451	241.061
.18935E+08	217.115	217.126	217.220	232.111	239.850	242.437
.22090E+08	218.446	218.456	218.550	233.321	241.000	243.568
.25246E+08	219.531	219.541	219.635	234.298	241.923	244.472
.28402E+08	220.454	220.465	220.558	235.122	242.697	245.229
.31558E+08	221.269	221.279	221.372	235.843	243.371	245.888
.63115E+08	225.705	225.715	225.804	239.594	246.778	249.176
.94673E+08	226.981	226.991	227.077	240.386	247.325	249.638
.12623E+09	227.190	227.200	227.283	240.208	246.950	249.195
.15779E+09	226.952	226.961	227.042	239.652	246.232	248.420
.18935E+09	226.159	226.168	226.247	238.552	244.974	247.107
.22090E+09	225.312	225.320	225.398	237.443	243.731	245.817
.25246E+09	224.436	224.445	224.520	236.326	242.490	244.532
.28402E+09	222.908	222.917	222.991	234.595	240.653	242.659
.31558E+09	221.593	221.601	221.674	233.109	239.079	241.054
.63115E+09	205.916	205.923	205.984	215.873	221.038	222.733
.94673E+09	190.761	190.767	190.819	199.538	204.098	205.583
.12623E+10	176.957	176.962	177.007	184.786	188.858	190.178
.15779E+10	165.159	165.164	165.203	172.160	175.799	176.970
.18935E+10	155.557	155.560	155.595	161.874	165.156	166.202

.22090E+10	147.591	147.594	147.625	153.329	156.308	157.249
.25246E+10	140.475	140.478	140.506	145.723	148.451	149.309
.28402E+10	134.895	134.898	134.923	139.746	142.267	143.057
.31558E+10	130.074	130.076	130.100	134.554	136.882	137.609
.63115E+10	106.786	106.788	106.801	109.551	110.989	111.429
.94673E+10	98.0300	98.0310	98.0414	100.176	101.291	101.630
.12623E+11	93.0410	93.0418	93.0504	94.8221	95.7480	96.0281
.15779E+11	89.5600	89.5607	89.5680	91.1014	91.9026	92.1439
.18935E+11	86.4502	86.4509	86.4573	87.8042	88.5077	88.7187
.22090E+11	83.9354	83.9360	83.9417	85.1441	85.7718	85.9597
.25246E+11	81.7797	81.7803	81.7853	82.8659	83.4300	83.5982
.28402E+11	79.9560	79.9564	79.9610	80.9435	81.4560	81.6085
.31558E+11	78.4334	78.4338	78.4380	79.3398	79.8102	79.9497

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:02 JUN 18, 1995 CP= 64552.200
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	14 TEMP s02o180	135 TEMP t02o180	620 TEMP s10i180	699 TEMP h10i180	701 TEMP c10i180	703 TEMP h10o180
.10000E-05	168.703	168.701	168.718	175.450	175.914	170.949
.20000E-05	203.535	203.532	203.547	209.145	209.207	204.437
31.558	203.535	203.533	203.548	209.144	209.207	204.437
.31558E+07	226.305	226.303	226.316	231.138	230.911	226.250
.63116E+07	231.492	231.490	231.503	236.186	235.914	231.284
.94673E+07	234.555	234.552	234.565	239.152	238.849	234.249
.12623E+08	236.792	236.789	236.802	241.310	240.986	236.413
.15779E+08	238.522	238.519	238.531	242.976	242.636	238.087
.18935E+08	239.919	239.916	239.929	244.318	243.966	239.440
.22090E+08	241.069	241.066	241.079	245.421	245.058	240.553
.25246E+08	241.991	241.988	242.000	246.300	245.929	241.443
.28402E+08	242.764	242.760	242.773	247.035	246.657	242.190
.31558E+08	243.437	243.433	243.446	247.673	247.290	242.841
.63115E+08	246.830	246.827	246.838	250.831	250.420	246.125
.94673E+08	247.364	247.361	247.372	251.216	250.802	246.632
.12623E+09	246.977	246.974	246.985	250.717	250.309	246.247
.15779E+09	246.249	246.246	246.256	249.901	249.501	245.531
.18935E+09	244.980	244.977	244.987	248.551	248.162	244.287
.22090E+09	243.727	243.724	243.734	247.232	246.855	243.060
.25246E+09	242.477	242.475	242.484	245.921	245.554	241.835
.28402E+09	240.633	240.630	240.640	244.031	243.679	240.030
.31558E+09	239.053	239.050	239.060	242.413	242.074	238.484
.63115E+09	220.961	220.959	220.967	223.975	223.759	220.713
.94673E+09	203.979	203.977	203.984	206.737	206.614	203.975
.12623E+10	188.721	188.719	188.726	191.258	191.202	188.886
.15779E+10	175.638	175.637	175.643	177.971	177.964	175.919
.18935E+10	164.973	164.972	164.977	167.129	167.155	165.330
.22090E+10	156.110	156.109	156.113	158.106	158.153	156.509
.25246E+10	148.251	148.250	148.255	150.107	150.167	148.673
.28402E+10	142.071	142.071	142.074	143.804	143.872	142.500
.31558E+10	136.692	136.691	136.695	138.307	138.380	137.118
.63115E+10	110.839	110.838	110.840	111.884	111.960	111.199
.94673E+10	101.163	101.163	101.165	101.989	102.056	101.470
.12623E+11	95.6365	95.6362	95.6377	96.3275	96.3863	95.9010
.15779E+11	91.8022	91.8020	91.8032	92.4041	92.4570	92.0378
.18935E+11	88.4165	88.4163	88.4173	88.9482	88.9966	88.6290
.22090E+11	85.6887	85.6885	85.6895	86.1651	86.2093	85.8817
.25246E+11	83.3533	83.3531	83.3540	83.7832	83.8239	83.5298
.28402E+11	81.3849	81.3847	81.3855	81.7770	81.8147	81.5477
.31558E+11	79.7435	79.7434	79.7441	80.1046	80.1397	79.8947

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:02 JUN 18, 1995 CP= 64552.220
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	666 TEMP s10o180	659 TEMP t10o180	765 TEMP s16i180	844 TEMP h16i180	846 TEMP c16i180	848 TEMP h16o180
.10000E-05	159.461	159.424	159.408	159.336	152.841	140.501
.20000E-05	193.917	193.880	193.861	192.950	186.376	174.644
31.558	193.917	193.880	193.861	192.949	186.376	174.644
.31558E+07	216.330	216.293	216.272	214.861	208.265	196.921
.63116E+07	221.499	221.462	221.441	219.949	213.375	202.147
.94673E+07	224.572	224.534	224.514	222.974	216.424	205.296
.12623E+08	226.824	226.787	226.766	225.190	218.666	207.622
.15779E+08	228.574	228.536	228.516	226.914	220.415	209.445
.18935E+08	229.993	229.956	229.935	228.314	221.840	210.937
.22090E+08	231.167	231.130	231.109	229.472	223.023	212.182
.25246E+08	232.112	232.075	232.054	230.406	223.980	213.197
.28402E+08	232.910	232.873	232.852	231.195	224.792	214.063
.31558E+08	233.609	233.572	233.552	231.887	225.507	214.830
.63115E+08	237.268	237.233	237.212	235.530	229.352	219.089
.94673E+08	238.057	238.022	238.003	236.342	230.342	220.404
.12623E+09	237.905	237.871	237.852	236.225	230.382	220.718
.15779E+09	237.383	237.350	237.331	235.741	230.033	220.601
.18935E+09	236.331	236.299	236.281	234.734	229.167	219.968
.22090E+09	235.269	235.238	235.220	233.713	228.268	219.270
.25246E+09	234.197	234.167	234.149	232.680	227.349	218.537
.28402E+09	232.528	232.498	232.481	231.055	225.833	217.189
.31558E+09	231.094	231.065	231.049	229.659	224.527	216.024
.63115E+09	214.361	214.337	214.324	213.294	209.007	201.806
.94673E+09	198.400	198.379	198.368	197.607	193.958	187.749
.12623E+10	183.939	183.921	183.912	183.356	180.209	174.777
.15779E+10	171.506	171.491	171.483	171.090	168.364	163.588
.18935E+10	161.353	161.340	161.334	161.058	158.662	154.409
.22090E+10	152.899	152.887	152.882	152.686	150.554	146.730
.25246E+10	145.375	145.365	145.360	145.220	143.303	139.838
.28402E+10	139.455	139.446	139.442	139.342	137.594	134.413
.31558E+10	134.308	134.300	134.296	134.227	132.631	129.711
.63115E+10	109.470	109.465	109.463	109.493	108.567	106.818
.94673E+10	100.127	100.123	100.122	100.166	99.4629	98.1188
.12623E+11	94.7859	94.7829	94.7816	94.8260	94.2488	93.1383
.15779E+11	91.0717	91.0692	91.0681	91.1122	90.6167	89.6588
.18935E+11	87.7802	87.7779	87.7770	87.8203	87.3885	86.5499
.22090E+11	85.1238	85.1219	85.1211	85.1625	84.7790	84.0320
.25246E+11	82.8484	82.8467	82.8460	82.8858	82.5431	81.8732
.28402E+11	80.9279	80.9263	80.9257	80.9639	80.6539	80.0460
.31558E+11	79.3256	79.3241	79.3236	79.3601	79.0766	78.5194

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:02 JUN 18, 1995 CP= 64552.230
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	811 TEMP s16o180	804 TEMP t16o180	910 TEMP s22i180	989 TEMP h22i180	991 TEMP c22i180	993 TEMP h22o180
.10000E-05	120.866	120.806	120.770	118.134	108.943	93.0567
.20000E-05	156.551	156.490	156.453	153.296	144.428	129.610

31.558	156.551	156.490	156.453	153.296	144.428	129.610
.31558E+07	179.829	179.768	179.729	176.222	167.593	153.471
.63116E+07	185.284	185.223	185.184	181.633	173.078	159.146
.94673E+07	188.620	188.559	188.520	184.944	176.452	162.672
.12623E+08	191.103	191.042	191.004	187.415	178.979	165.326
.15779E+08	193.062	193.001	192.963	189.367	180.981	167.438
.18935E+08	194.677	194.617	194.578	190.980	182.641	169.196
.22090E+08	196.034	195.974	195.936	192.337	184.043	170.687
.25246E+08	197.152	197.092	197.054	193.457	185.204	171.930
.28402E+08	198.114	198.055	198.016	194.423	186.210	173.013
.31558E+08	198.973	198.914	198.876	195.287	187.113	173.989
.63115E+08	203.935	203.878	203.841	200.327	192.469	179.920
.94673E+08	205.771	205.716	205.680	202.254	194.651	182.543
.12623E+09	206.514	206.460	206.425	203.085	195.701	183.958
.15779E+09	206.753	206.700	206.666	203.404	196.206	184.768
.18935E+09	206.470	206.418	206.385	203.207	196.196	185.062
.22090E+09	206.071	206.021	205.988	202.885	196.034	185.160
.25246E+09	205.615	205.566	205.534	202.500	195.799	185.166
.28402E+09	204.511	204.463	204.432	201.468	194.904	184.485
.31558E+09	203.549	203.501	203.471	200.566	194.116	183.877
.63115E+09	191.204	191.165	191.140	188.797	183.408	174.806
.94673E+09	178.574	178.542	178.521	176.608	172.014	164.628
.12623E+10	166.696	166.668	166.651	165.075	161.092	154.637
.15779E+10	156.437	156.413	156.399	155.087	151.608	145.928
.18935E+10	148.006	147.986	147.973	146.853	143.770	138.719
.22090E+10	140.963	140.944	140.933	139.961	137.205	132.672
.25246E+10	134.595	134.578	134.568	133.716	131.227	127.119
.28402E+10	129.589	129.574	129.565	128.803	126.526	122.757
.31558E+10	125.272	125.258	125.250	124.568	122.484	119.025
.63115E+10	104.127	104.120	104.115	103.763	102.537	100.470
.94673E+10	96.0442	96.0384	96.0350	95.7787	94.8419	93.2581
.12623E+11	91.4208	91.4160	91.4132	91.2087	90.4379	89.1312
.15779E+11	88.1748	88.1707	88.1683	87.9966	87.3337	86.2074
.18935E+11	85.2484	85.2448	85.2428	85.0964	84.5175	83.5318
.22090E+11	82.8715	82.8683	82.8665	82.7383	82.2234	81.3456
.25246E+11	80.8313	80.8284	80.8268	80.7141	80.2533	79.4663
.28402E+11	79.0995	79.0969	79.0954	78.9949	78.5774	77.8635
.31558E+11	77.6511	77.6487	77.6474	77.5566	77.1745	76.5203

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***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0A *****
 38303 VERSION=HP 9000/7XX 15:14:02 JUN 18, 1995 CP= 64552.240
 FOR SUPPORT CALL ROBERT BAHNEY PHONE (702) 794-5337 FAX (702) 794-1844

44 BWR UCF/WP at 100 years

***** ANSYS POST26 VARIABLE LISTING *****

TIME	956 TEMP	949 TEMP	4028 TEMP	3931 TEMP	4565 TEMP
	s22o180	t22o180	i22i180	i22o180	o22o180
.10000E-05	66.4824	66.3740	29.3072	28.3491	26.1414
.20000E-05	105.068	104.953	72.4304	71.3761	69.1441
31.558	105.068	104.953	72.4303	71.3761	69.1441
.31558E+07	130.258	130.141	100.580	99.4756	97.2122
.63116E+07	136.274	136.157	107.367	106.261	104.021
.94673E+07	140.086	139.969	111.752	110.648	108.429
.12623E+08	142.971	142.854	115.088	113.987	111.789
.15779E+08	145.285	145.169	117.783	116.685	114.506
.18935E+08	147.226	147.111	120.057	118.962	116.801
.22090E+08	148.884	148.769	122.012	120.921	118.775
.25246E+08	150.279	150.164	123.670	122.584	120.452
.28402E+08	151.503	151.388	125.135	124.053	121.934
.31558E+08	152.613	152.499	126.472	125.394	123.288
.63115E+08	159.572	159.460	135.064	134.025	132.017
.94673E+08	162.958	162.850	139.573	138.566	136.634
.12623E+09	164.998	164.893	142.491	141.513	139.644
.15779E+09	166.327	166.225	144.528	143.575	141.758
.18935E+09	167.131	167.031	146.003	145.076	143.311

.22090E+09	167.664	167.566	147.101	146.196	144.475
.25246E+09	168.070	167.975	148.022	147.137	145.457
.28402E+09	167.743	167.650	148.124	147.260	145.616
.31558E+09	167.429	167.337	148.166	147.317	145.705
.63115E+09	161.023	160.947	144.869	144.172	142.837
.94673E+09	152.802	152.739	138.869	138.285	137.153
.12623E+10	144.304	144.251	132.039	131.541	130.563
.15779E+10	136.862	136.816	126.013	125.584	124.733
.18935E+10	130.660	130.620	120.954	120.579	119.827
.22090E+10	125.442	125.407	116.690	116.360	115.689
.25246E+10	120.569	120.537	112.604	112.309	111.705
.28402E+10	116.749	116.720	109.418	109.151	108.599
.31558E+10	113.513	113.487	106.769	106.527	106.022
.63115E+10	97.1797	97.1648	93.1050	92.9682	92.6764
.94673E+10	90.7401	90.7289	87.6046	87.5026	87.2825
.12623E+11	87.0543	87.0452	84.4606	84.3780	84.1980
.15779E+11	84.4176	84.4098	82.1778	82.1071	81.9529
.18935E+11	81.9654	81.9587	80.0013	79.9404	79.8063
.22090E+11	79.9508	79.9448	78.1984	78.1443	78.0253
.25246E+11	78.2158	78.2105	76.6426	76.5947	76.4885
.28402E+11	76.7291	76.7244	75.3004	75.2571	75.1610
.31558E+11	75.4806	75.4762	74.1697	74.1304	74.0426

***** ROUTINE COMPLETED ***** CP = 64552.250

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*****
End of batch input file
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PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= ucf44h.db
FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 29
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

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*-----*
                ANSYS RUN COMPLETED
*-----*

                REV. 5.0 A                                HP 9000/7XX

CP TIME      (sec) =      64556.400      TIME  =  15:14:06
ELAPSED TIME (sec) =      66424.000      DATE   =  06/18/95

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