1. ECN 605714

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Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedeure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. J. V. Nelson/Criticality & Shielding/H0-35 376-4480	4. USQ Required? ☐ Yes ☒ No	5. Date 4/9/97
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13a. Description of Change Document was updated to include data for all cycles that MFA-1 and MFA-2 were irradiated in the FFTF (instead of Cycles 10A and 10B only), and to include pin distributions of fast flux.		13b. Design Baseline Document? ☐ Yes ☒ No	
14a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐			
14b. Justification Details Contract with the customer (PNC of Japan) was changed to include data for all cycles that MFA-1 and MFA-2 were irradiated in lieu of complete descriptions of all assemblies in Cycle 10A and all assemblies inserted during subsequent reactor outages.			
15. Distribution (include name, MSIN, and no. of copies)			

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ENGINEERING CHANGE NOTICE

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1. ECN (use no. from pg. 1)

605714

16. Design Verification Required

☐ Yes
☒ No

17. Cost Impact

ENGINEERING

Additional ☐ \$
Savings ☐ \$

CONSTRUCTION

Additional ☐ \$
Savings ☐ \$

18. Schedule Impact (days)

Improvement ☐
Delay ☐

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐		☐
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision

Document Number/Revision

Document Number Revision

21. Approvals

Signature	Date	Signature	Date
Design Authority		Design Agent	
Cog. Eng. J. V. Nelson <i>J. V. Nelson</i>	<u>4/16/97</u>	PE	
Cog. Mgr. J. Greenborg <i>J. Greenborg</i>	<u>4/18/97</u>	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other		Other	
Cog. Eng. E. R. Cramer <i>E. R. Cramer</i>	<u>4/16/97</u>		
Reviewer R. L. Simons <i>R. L. Simons</i>	<u>4/17/97</u>		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

Irradiation Data for the MFA-1 and MFA-2 Tests in the FFTF

J. V. Nelson and E. R. Cramer

Fluor Daniel Northwest Inc./Numatec Hanford Company, Richland, WA 99352
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Key Words: FFTF, MONJU, Liquid Metal Reactor, ^{and} fuel test, LMR, MFA

Abstract: This report provides key information on the irradiation environment of the MONJU fuel tests MFA-1 and MFA-2 in the Fast Flux Test Facility (FFTF). This information includes the fission powers, neutron fluxes, sodium temperatures and sodium flow rates in MFA-1, MFA-2 and adjacent assemblies. It also includes MFA-1 and MFA-2 compositions as a function of exposure. The work was performed at the request of Power Reactor and Nuclear Fuels Corporation (PNC) of Japan.

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Release Approval Date

Release Stamp

Approved for Public Release

IRRADIATION DATA FOR THE MFA-1 AND MFA-2 TESTS IN THE FFTF

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IRRADIATION DATA FOR THE MFA-1 AND MFA-2 TESTS IN THE FFTF

1.0 Introduction

This report provides data relevant to the irradiation of the MONJU fuel experiments MFA-1 and MFA-2 during their residence in the Fast Flux Test Facility (FFTF) core. MFA-1 was irradiated during operating Cycles 10A-1 through 12A-2, while MFA-2 was irradiated during Cycles 10A-1 through 12B-2. The operating history of these cycles is summarized in Table 1. The data are supplied in tabular form in this report, and most data are also available in electronic forms.

Data given for MFA-1 and MFA-2 include:

- assembly fission powers, fast neutron fluxes ($\phi > 0.1$ MeV), total fluxes, outlet temperatures and coolant flow rates,
- spatial distributions of fast flux and fission power by pin, and fast flux at the duct walls,
- subchannel sodium temperatures, and
- burnup dependant material compositions.

Also included are powers, outlet temperatures, and flow rates for the assemblies adjacent to MFA-1 and MFA-2. Composition data are given for the end of each cycle. Most of the other data are provided for the beginning and end of each of the listed operating cycles, except for cycles less than 25 equivalent full power days (EFPD) in length. For these short cycles, only beginning of cycle data are included. However, no data are given for Cycle 10C-2 because its length was only 2.9 EFPD. Data for the end of Cycle 10C-1 are very representative of the data for Cycle 10C-2.

The irradiation history of MFA-1 and MFA-2 is listed in Table 2. Figure 1 shows the FFTF core loading for Cycle 10A-1. Loading changes made in core locations adjacent to MFA-1 and MFA-2 between Cycles 10A-1 and 10C-3 are identified in Table 3. As indicated in Table 2, MFA-1 and MFA-2 were both moved during the Cycle 11A-1 outage. Figure 2 shows the FFTF core loading for Cycle 11A-1. Loading changes made in core locations adjacent to MFA-1 and MFA-2 between Cycles 11A-1 and 11B-1 are identified in Table 4.

MFA-1 was relocated to core location 1405 during the Cycle 11B-2 outage. Figure 3 shows the FFTF core loading for Cycle 11B-2. Loading changes made in core locations adjacent to MFA-1 and MFA-2 between Cycles 11B-2 and 12A-2 are identified in Table 5. During the Cycle 12B-1 outage, MFA-1 was removed from the core and MFA-2 was moved to core location 2405. Figure 4 shows the FFTF core loading for Cycle 12B-1. There were no loading changes made to core locations adjacent to MFA-2 after Cycle 12B-1.

Table 1. Summary of FFTF Cycles 10A-1 through 12B-2 Power Operation

Cycle	Startup Date	Shutdown Date	Cycle Length (EFPD*)
10A-1	11/18/87	1/26/88	66.3
10A-2	2/ 1/88	2/23/88	20.3
10A-3	2/25/88	3/ 4/88	5.8
10A-4	3/ 7/88	5/ 7/88	59.4
10B	6/11/88	10/17/88	126.7
10C-1	11/ 9/88	1/ 8/89	56.9
10C-2	1/16/89	1/20/89	2.9
10C-3	1/23/89	3/13/89	47.0
11A-1	5/ 3/89	5/16/89	11.3
11A-2	5/21/89	6/ 2/89	10.5
11A-3	6/14/89	9/19/89	94.6
11B-1	1/ 4/90	4/ 8/90	85.5
11B-2	5/29/90	10/27/90	132.7
11C	12/15/90	3/19/91	81.5
12A-1	5/27/91	7/20/91	52.8
12A-2	8/ 1/91	9/21/91	48.6
12B-1	11/22/91	1/15/92	50.3
12B-2	1/26/92	3/19/92	51.6

* EFPD = equivalent full power days. Full power = 291 MW thermal.

Table 2. Irradiation History of MFA-1 and MFA-2

Cycle	Cycle Length (EFPD)	Assembly Location		
		MFA-1	MFA-2	
10A-1	66.3	1506	2507	
10A-2	20.3			
10A-3	5.8			
10A-4	59.4			
10B	126.7			
10C-1	56.9			
10C-2	2.9			
10C-3	47.0			
11A-1	11.3	1404	2506	
11A-2	10.5			
11A-3	94.6			
11B-1	85.5			
11B-2	132.7	1405		
11C	81.5			
12A-1	52.8			
12A-2	48.6			
12B-1	50.3			
12B-2	51.6		2405

Figure 1. FFTF Cycle 10A-1 Core Loading

Table 3. Loading Changes Made to Core Locations adjacent to MFA-1 and MFA-2 for Cycles 10A-2 through 10C-3

Cycle	Core Position	Assembly Removed (Serial No. & Type)	Assembly Inserted (serial No. & Type)
10A-2	2608	2156 ACO-16 ^c	4114 3.1DFA ^a
10A-4	2609	2065 PO-1 ^d	4140 3.1DFA
10B	1405	16391 4.2DFA ^b	2168 MFF-2 ^e
	1505	8259 4.1DFA ^b	8265 4.1DFA
	2405	2146 ACO-6 ^c	16396 3.2DFA ^a
	2506	8210 3.1DFA	8268 4.1DFA
	2609	4140 3.1DFA	4152 4.1DFA
10C-1	1404	16492 IFR-1 ^e	16391 4.2DFA
	1505	8265 4.1DFA	8228 3.1DFA
	1507	8260 4.1DFA	8209 3.1DFA
	1607	4174 3.1DFA	4192 4.1DFA
	2405	16396 3.2DFA	16390 3.2DFA
	2508	8282 4.1DFA	8212 3.1DFA

^a 3.1DFA and 3.2DFA are standard FFTF series I drivers

^b 4.1DFA and 4.2DFA are standard FFTF series II drivers

^c ACO-6 and ACO-16 are Core Demonstration Experiment (CDE) fuel assemblies

^d PO-1 is an advanced oxide fuel test

^e MFF-2 and IFR-1 are metal fuel experiments

Figure 2. FFTF Cycle 11A-1 Core Loading

Table 4. Loading Changes Made to Core Locations adjacent to MFA-1 and MFA-2 for Cycles 11A-2 through 11B-1

Cycle	Core Position	Assembly Removed (Serial No. & Type)	Assembly Inserted (serial No. & Type)
11A-3	2607	4223 4.1DFA ^b	4120 3.1DFA ^a
11B-1	1304	16420 4.2DFA ^b	2089 MFF-5 ^c
	1403	16403 3.2DFA ^a	16420 4.2DFA
	2405	16390 3.2DFA	2116 UO1 ^d

^a 3.1DFA and 3.2DFA are standard FFTF series I drivers.

^b 4.1DFA and 4.2DFA are standard FFTF series II drivers.

^c MFF-2 is a metal fuel experiment.

^d UO-1 is a fuel test containing 7 enriched UO₂ pins and 210 mixed-oxide pins.

Table 5. Loading Changes Made to Core Locations adjacent to MFA-1 and MFA-2 for Cycles 11C through 12A-2

Cycle	Core Position	Assembly Removed (Serial No. & Type)	Assembly Inserted (serial No. & Type)
11C	2405	2116 UO-1 ^c	16388 3.2DFA ^a
	2505	8263 4.1DFA ^b	8244 4.1DFA
	2507	8268 4.1DFA	8283 4.1DFA
	2607	4120 3.1DFA ^a	4172 4.1DFA
12A-1	1406	HM212 MOTA1G ^d	16498 4.2DFA
12A-2	1507	8265 4.1DFA	8245 4.1DFA

^a 3.1DFA and 3.2DFA are standard FFTF series I drivers

^b 4.1DFA and 4.2DFA are standard FFTF series II drivers

^c UO-1 is a fuel test containing 7 enriched UO₂ pins and 210 mixed-oxide pins.

^d MOTA1G is a material open test assembly

Figure 3. FFTF Cycle 11B-2 Core Loading

Figure 4. FFTF Cycle 12B-1 Core Loading

2.0 Description of Data Tables

Included Sections 4.0 through 4.17 of this report are 18 different tables for each cycle. As indicated above, some of these tables were generated for beginning of cycle (BOC) conditions, some were generated for end of cycle (EOC) conditions, and many were generated for both BOC and EOC conditions. Most tables are also available in electronic form on disk. However, others exist only in hard copy form from previous computer runs. These runs could not be repeated to obtain disk files because the computer programs needed have not been installed on any computer system that is currently available.

Table 6 summarizes the information contained in each of the 18 data tables, indicates whether this information is provided for BOC, EOC or both, and identifies the tables that are also available on disk. Data tables (both in printed form and on disk files) are identified using the following notation: *TCCC.N*, where *T* is either the letter B (for beginning of cycle) or E (for end of cycle), *CCC* is a cycle name (i.e., 10A-1, 10A-2, ..., 12B-2), and *N* is a table number (1 - 18) identified in Table 6. For example, Table B10A-4.1 lists the fission power generated in MFA-1, MFA-2 and neighboring assemblies at the beginning of Cycle 10A-4 (BOC 10A-4).

The following sections explain the contents of each of the 18 types of tables.

2.1 Assembly Fission Power

The fission power generated in MFA-1 and each of its six adjacent assemblies, and in MFA-2 and each of its six adjacent assemblies are listed in Tables B10A-1.1, E10A-1.1, B10A-2.1, E10A-2.1, etc. In these tables, the total fission power is given for each assembly. Also, a breakdown of the power by axial material region (fuel, axial blankets and UO_2 insulator pellets) is included. Standard fuel assemblies that do not have axial blankets have insulator pellets between the fuel and the axial reflector regions.

Fission powers were computed using the three-dimensional diffusion theory and burnup program 3DB with nuclear cross section data in 12 energy groups. The computed flux and power data were adjusted by applying row-dependant bias factor that ranged in value from 0.98 to 1.02. For rows 4 and 5 where MFA-1 and MFA-2 were located, the bias factors applied were 0.988 and 0.984, respectively. The bias factors were determined by comparing the results of measurements made as part of the FFTF reactor characterization program, diffusion theory calculations and Monte Carlo (MCNP) calculations.

2.2 Assembly Averaged Fast and Total Flux

Assembly averaged fast flux ($\phi > 0.1$ MeV) and total flux data for MFA-1 and MFA-2 at the beginning and end of each cycle (except those noted in Table 6) are given in Tables B10A-1.2, E10A-1.2, B10A-2.2, etc. In computing the data in these tables, only the fuel region of each assembly was included in the averaging process. The group flux data were obtained from the same 3DB calculations used to produce the fission power data. Again, a bias factor (0.988 or 0.984) was applied to the 3DB results.

Table 6. Summary of Data Included for each Cycle

Table No.	Description	Created for BOC or EOC?	Included on disk?
1	Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies	BOC & EOC ^a	yes
2	Assembly Averaged Fast and Total Flux for MFA-1 and MFA-2	BOC & EOC ^a	yes
3	Axial Distribution of Total Flux, Fast Flux and Power in MFA-1	BOC & EOC ^a	yes
4	Axial Distribution of Total Flux, Fast Flux and Power in MFA-2	BOC & EOC ^a	yes
5	Fission Power Distribution by Pin in MFA-1	BOC & EOC ^a	yes
6	Fission Power Distribution by Pin in MFA-2	BOC & EOC ^a	yes
7	Fast Flux Distribution by Pin in MFA-1	BOC & EOC ^a	yes
8	Fast Flux Distribution by Pin in MFA-2	BOC & EOC ^a	yes
9	MFA-1 and MFA-2 Duct Wall Flux Greater than 0.1 MeV	BOC & EOC ^a	yes
10	Sodium Outlet Temperatures and Flow Rates for MFA-1, MFA-2 and Neighboring Assemblies	BOC & EOC ^b	yes
11	MFA-1 Sodium Subchannel Temperatures at Top of Core Elevation	BOC & EOC ^c	no
12	MFA-2 Sodium Subchannel Temperatures at Top of Core Elevation	BOC & EOC ^c	no
13	MFA-1 Sodium Subchannel Temperatures at Elevation of Upper Axial Blanket	BOC & EOC ^c	no
14	MFA-2 Sodium Subchannel Temperatures at Elevation of Upper Axial Blanket	BOC & EOC ^c	no
15	MFA-1 Sodium Subchannel Temperatures at Top of Fuel Pin Bundle	BOC & EOC ^c	no
16	MFA-2 Sodium Subchannel Temperatures at Top of Fuel Pin Bundle	BOC & EOC ^c	no
17	Composition of MFA-1	EOC	yes
18	Composition of MFA-2	EOC	yes

^a Table numbers 1 - 9 are not include for the end of Cycles 10A-2, 10A-3, 11A-1 and 11A-2 because of the short length of these cycles.

^b Tables of computed or measured sodium outlet temperatures and computed flow rates are given for the time periods listed in Table 7.

^c Sodium subchannel temperatures are available for only the times listed in Table 8.

2.3 Axial Distributions of Total Flux, Fast Flux and Power

The axial distributions of total flux, fast flux ($\phi > 0.1$ MeV) and fission power at the beginning and end of each cycle (except those noted in Table 6) are given for MFA-1 in Tables B10A-1.3, E10A-1.3, B10A-2.3, etc. Likewise, the axial distributions of total flux, fast flux and fission power are given for MFA-2 in Tables B10A-1.4, E10A-1.4, B10A-2.4, etc.

The axial locations relative to the core midplane in units of centimeters (cm) at hot, full power conditions are given in the first column of each table. Negative values indicate locations below the midplane and positive values indicate locations above the midplane. The flux and power data in the tables are normalized so that the axial average of each distribution over the active core region is 1.0. The active core region extended from -46.14 cm to 46.14 cm in the 3DB models of the FFTF at hot, full power conditions.

2.4 Fission Power Distribution by Pin

The distribution of fission power by pin at the beginning and end of each cycle is given for MFA-1 in Tables B10A-1.5, E10A-1.5, B10A-2.5, etc. Likewise, the distribution of fission power by pin is given for MFA-2 in Tables B10A-1.6, E10A-1.6, B10A-2.6, etc. The direction north (N) is indicated in these tables.

The data in each table were based on a power distribution computed by 3DB. These distributions had six data points per assembly at each axial elevation. Pin power data were generated by first axially averaging the 3DB computed powers, and then doing a least-squares quadratic fit to the available data. Finally, the pin powers obtained were normalized so that the linear power averaged over the fuel region of an assembly is 1.0.

Using the given assembly powers, the axial power distributions and the pin power distributions, the linear power in any MFA-1 or MFA-2 pin at any axial elevation can be easily determined.

2.5 Fast Flux Distribution by Pin

The distribution of fast flux by pin is given at the beginning and end of each cycle for MFA-1 in Tables B10A-1.7, E10A-1.7, B10A-2.7, etc. Likewise, the distribution of fast flux by pin in MFA-2 is given in Tables B10A-1.8, E10A-1.8, B10A-2.8, etc. These data were generated using the same method, described above, that was used to obtain the pin powers. Again, the flux data were normalized so that the average fast flux in the fuel region of MFA-1 or MFA-2 is 1.0.

Using a given assembly averaged fast flux value, the corresponding axial fast flux distribution and pin distribution of fast flux, the fast flux at any axial level in any MFA-1 or MFA-2 pin can be easily determined.

Pin distributions of total flux are not given, but assembly-averaged total flux data and axial distributions of total flux are included in this report. Also, the pin distributions of total and fast flux are very similar. For example, the maximum difference for any pin in MFA-1 and MFA-2 during Cycles 10A and 10B was only about 2.6 percent. Thus, the total flux at any axial level in any MFA-1 or MFA-2 pin can be closely approximated.

2.6 Duct Wall Flux Greater than 0.1 MeV

The fluxes greater than 0.1 MeV at each of the six faces of the MFA-1 and MFA-2 ducts are given in Tables B10A-1.9, E10A-1.9, B10A-2.9, etc. The data given represent axial averages. To obtain the duct wall flux at a particular axial elevation, multiply by an axial factor from Tables B10A-1.3, B10A-1.4, E10A-1.3, E10A-1.4, etc.

Each of the six duct walls in each assembly is identified in the tables by the direction it faces - east (E), southeast (SE), southwest (SW), west (W), northwest (NW), or northeast (NE). Figures 1, 2, 3 and 4 show the orientation of MFA-1 and MFA-2. For example, in Figure 1, the east (E) duct wall of MFA-1 in position 1506, is adjacent to the assembly in lattice position 1505, and the east duct wall of MFA-2 in 2507 is adjacent to the assembly in lattice position 2508.

Duct wall fluxes were generated by axially averaging the flux distributions computed by 3DB, integrating over energy to obtain the flux greater than 0.1 MeV at each space point, doing a linear interpolation between the two flux values on each side of a duct wall face, and finally applying the adjustment factor of 0.988 or 0.984 described earlier.

2.7 Sodium Outlet Temperatures and Assembly Flow Rates

Sodium outlet temperatures and flow rates for MFA-1, MFA-2 and the assemblies adjacent to them are given in Tables B10A-1.10, E10A-1.10, B10A-2.10, etc. In general, computed outlet temperatures are tabulated for the beginning and end of each cycle based on data extracted from FFTF core reload design reports and cycle reports. There are, however, a number of exceptions, which are identified in Table 7.

Assembly outlet temperature and flow rates for some time periods were not computed or reported because short cycle lengths and minor loading changes did not result in significant power or flow changes. Missing data can be estimated from data given for an earlier or later time period.

Assembly flow rate data were calculated for full power conditions. The calculated pressure drop and the total reactor flow rate upon which each assembly flow rate was based are given.

2.8 Sodium Subchannel Temperatures

Calculated sodium subchannel temperatures at three axial locations were available from previous analyses for the time periods listed in Table 8. As with the assembly outlet temperatures, subchannel temperatures were not computed when short cycles and minor loading changes resulted in no significant temperature changes.

Subchannel temperatures at the top of core elevation are given for MFA-1 in Tables B10A-1.11, B10A-2.11, etc., and for MFA-2 in Tables B10A-1.12, B10A-2.12, etc. Subchannel temperatures at the top of the upper axial blanket are given for MFA-1 in Tables B10A-1.13, B10A-2.13, etc., and for MFA-2 in

Tables B10A-1.14, B10A-2.14, etc. Subchannel temperatures at top of the fuel pin bundle are given for MFA-1 in Tables B10A-1.15, B10A-2.15, etc, and for MFA-2 in Tables B10A-1.16, B10A-2.16, etc.

All temperatures are in degrees Fahrenheit. The row of numbers just outside the asterisks on each map are calculated duct wall temperatures, and the outside row of temperatures on each map are the temperatures of the sodium between assemblies. The direction north is indicated on each map.

Table 7. Cycles for which Assembly Outlet Temperatures and Flow Rates are Included

Cycle	Status ^a	
	BOC ^b	EOC ^c
10A-1	C M	C
10A-2	C M	
10A-3	M	
10A-4	M	C M
10B	C M	C M
10C-1	C	
10C-2		
10C-3		C
11A-1	C	
11A-2		
11A-3		C
11B-1	C	
11B-2		C
11C	C	C
12A-1	C	C
12A-2	C	C
12B-1	C	C
12B-2	C	C

^a Status indication: A blank entry means no data are included. A non-blank entry means temperature and flow data are included. 'C' indicates that calculated temperatures are listed. 'M' indicates that measured temperatures are listed.

^b BOC = beginning of cycle

^c EOC = end of cycle

Table 8. Cycles for which Assembly Subchannel Temperatures Maps are Included

Cycle	Status ^a	
	BOC ^b	EOC ^c
10A-1	X	
10A-2	X	
10A-3		
10A-4		
10B	X	X
10C-1	X	
10C-2		
10C-3		X
11A-1	X	
11A-2		
11A-3		X
11B-1	X	X
11B-2	X	X
11C	X	X
12A-1	X	X
12A-2	X	X
12B-1	X	X
12B-2	X	X

^a Status indication: 'X' indicates that subchannel temperature data are included. A blank entry means no data are included.

^b BOC = beginning of cycle

^c EOC = end of cycle

The temperature calculations were performed using the SUPERENERGY code. The power of each pin, the assembly flow distribution and the reactor inlet temperature of 680°F were input to the code. SUPERENERGY calculates subchannel temperatures by using energy balances and correlations for subchannel mixing. SUPERENERGY has not been installed on any computer system that is currently available. For this reason, the calculations could not be repeated to obtain electronic copies of the temperature data, or missing data.

Fuel pin cladding temperatures are not available, but can be computed from the data provided.

2.9 Material Compositions

Burnup-dependant material compositions for MFA-1 at the end of each cycle are given in Tables E10A-1.17, E10A-2.17, etc, while the compositions for MFA-2 are given in Tables E10A-1.18, E18A2.18, etc. Each table lists homogenized material compositions for 11 axial regions in MFA-1 or MFA-2. These 11 regions are identified in Table 9. The axial extent of each region, as modeled in 3DB, is listed in the material composition tables. The units are centimeters (cm) relative to the core midplane at hot, full power conditions. The compositions are in units of atoms/b-cm at hot, full power conditions. Both the fresh (beginning of life) and EOC compositions are included in each table. Compositions of MFA-1 and MFA-2 at BOC 10A-1 were the fresh values listed. Compositions at the beginning of any other cycle were essentially those listed for the end of the previous cycle. The only differences are due to decay of ^{241}Pu to ^{241}Am .

The burnup-dependant compositions for the axial blankets (axial regions 3 and 10) and the fuel (axial regions 4 through 9) were computed using the three-dimensional diffusion theory and burnup code, 3DB. The fuel was subdivided into six axial regions to properly account for the effect that the axial flux distribution has on the fuel depletion rate.

The constituents of the materials listed in the composition tables are individual isotopes with two exceptions. The first exception is that the constituent labelled "FP" represents an average pseudo fission product pair. An atom density for FP specifies the concentration of fission product pairs, not individual fission product nuclides. The microscopic cross section data used for fission products in the 3DB calculations were generated assuming all fissions were from ^{239}Pu .

The second exception is that the constituent labelled "SS-316" represents type 316 stainless steel. An atom density given for SS-316 indicates the total number of atoms in stainless steel per unit volume. SS-316 was used in the calculational models for the ducts, cladding and wire wrap in both MFA-1 and MFA-2, even though these components in MFA-2 were fabricated from an advanced austenitic stainless steel. The composition used in generating nuclear cross section sets for SS-316 was based on the 1977 RDT & ASTM standard, and is listed in Table 10.

3.0 Contents of the Data Disk

The information identified in Table 6 was copied to a 3.5 inch floppy disk that is DOS formatted with 1.44 MB capacity. All information on the disk is contained in standard text (ASCII) files. There are 17 directories on the disk, one for each cycle analyzed. The directory names are 10A-1, 10A-2, 10A-3, 10A-4, 10-B, etc. As described earlier, the files on the disk are named the same as the data tables. For example, assembly fission powers for EOC 10A-4 are listed in Table E10A-4.1 and on disk file E10A-4.1, which is located in directory 10A-4. Table 6 indicates which of the data tables for each cycle are included on the disk. A table of contents of the disk is given in Table 11.

Table 9. Description of Axial Regions in Material Composition Tables

Axial Level	Axial Range Relative to Core Midplane (cm) ^a	Description
1	-100.28 ^b to -75.28	Lower axial shield
2	-75.28 to -62.78	Pin attachment region
3	-62.78 to -46.14	Lower axial blanket
4 - 9	-46.14 to 46.14 (divided into 6 regions, each 15.38 cm high)	Fuel region
10	46.14 to 62.78 ^c	Upper axial blanket
11	62.78 to 116.00 ^b	Gas plenum

^a Dimensions are representative of hot, full power conditions. Negative numbers indicate locations below the core midplane. Positive numbers indicate locations above the core midplane.

^b The axial range in the 30B models was 100.28 cm below the core midplane to 116.00 cm above the midplane.

^c The upper axial blankets of MFA-1 and MFA-2 are actually 7.62 cm (3 in.) long. However, they were modeled as being 16.64 cm long (at hot, full power conditions) to match existing axial boundaries in the 30B model.

Table 10. Composition of Type 316 Stainless Steel (SS-316)

Constituent	Weight Percent	Constituent	Weight Percent
Fe	62.19	Mn	2.00
Cr	18.00	Si	0.75
Ni	14.00	C	0.06
Mo	3.00		

Table 11. Disk Table of Contents (Sheet 1 of 4)

File Name					File Name				
Base		Size	Creation		Base		Size	Creation	
Ext.		(bytes)	Date	Time	Ext.		(bytes)	Date	Time
Directory of 10A-1					22 files, 40,971 bytes total				
B10A-1	1	989	12-30-96	2:34p	E10A-1	1	989	12-30-96	2:35p
B10A-1	2	271	12-30-96	2:34p	E10A-1	2	271	12-30-96	2:35p
B10A-1	3	2,767	12-30-96	2:34p	E10A-1	3	2,767	12-30-96	2:35p
B10A-1	4	2,767	12-30-96	2:34p	E10A-1	4	2,767	12-30-96	2:35p
B10A-1	5	1,615	12-30-96	2:34p	E10A-1	5	1,615	12-30-96	2:35p
B10A-1	6	1,615	12-30-96	2:34p	E10A-1	6	1,615	12-30-96	2:35p
B10A-1	7	1,611	12-30-96	2:34p	E10A-1	7	1,611	12-30-96	2:35p
B10A-1	8	1,611	12-30-96	2:34p	E10A-1	8	1,611	12-30-96	2:35p
B10A-1	9	350	01-06-97	4:08p	E10A-1	9	350	01-06-97	4:10p
B10A-1	10	863	01-09-97	9:03a	E10A-1	10	708	01-09-97	9:03a
					E10A-1	17	6,104	12-30-96	2:35p
					E10A-1	18	6,104	12-30-96	2:35p
Directory of 10A-2					12 files, 26,667 bytes total				
B10A-2	1	989	12-30-96	2:36p	B10A-2	7	1,611	12-30-96	2:36p
B10A-2	2	271	12-30-96	2:36p	B10A-2	8	1,611	12-30-96	2:36p
B10A-2	3	2,767	12-30-96	2:36p	B10A-2	9	350	01-06-97	4:12p
B10A-2	4	2,767	12-30-96	2:36p	B10A-2	10	863	01-09-97	9:04a
B10A-2	5	1,615	12-30-96	2:36p	E10A-2	17	6,104	12-30-96	2:37p
B10A-2	6	1,615	12-30-96	2:36p	E10A-2	18	6,104	12-30-96	2:37p
Directory of 10A-3					12 files, 26,494 bytes total				
B10A-3	1	989	12-30-96	2:38p	B10A-3	7	1,611	12-30-96	2:38p
B10A-3	2	271	12-30-96	2:38p	B10A-3	8	1,611	12-30-96	2:38p
B10A-3	3	2,767	12-30-96	2:38p	B10A-3	9	350	01-06-97	4:13p
B10A-3	4	2,767	12-30-96	2:38p	B10A-3	10	690	01-09-97	9:04a
B10A-3	5	1,615	12-30-96	2:38p	E10A-3	17	6,104	12-30-96	2:38p
B10A-3	6	1,615	12-30-96	2:38p	E10A-3	18	6,104	12-30-96	2:38p
Directory of 10A-4					22 files, 40,952 bytes total				
B10A-4	1	989	12-30-96	2:39p	E10A-4	1	989	12-30-96	2:40p
B10A-4	2	271	12-30-96	2:39p	E10A-4	2	271	12-30-96	2:40p
B10A-4	3	2,767	12-30-96	2:39p	E10A-4	3	2,767	12-30-96	2:40p
B10A-4	4	2,767	12-30-96	2:39p	E10A-4	4	2,767	12-30-96	2:40p
B10A-4	5	1,615	12-30-96	2:39p	E10A-4	5	1,615	12-30-96	2:40p
B10A-4	6	1,615	12-30-96	2:39p	E10A-4	6	1,615	12-30-96	2:40p
B10A-4	7	1,611	12-30-96	2:39p	E10A-4	7	1,611	12-30-96	2:40p
B10A-4	8	1,611	12-30-96	2:39p	E10A-4	8	1,611	12-30-96	2:40p
B10A-4	9	350	01-06-97	4:14p	E10A-4	9	350	01-06-97	4:14p
B10A-4	10	689	01-09-97	9:04a	E10A-4	10	863	01-09-97	8:58a
					E10A-4	17	6,104	12-30-96	2:40p
					E10A-4	18	6,104	12-30-96	2:40p
Directory of 10B					22 files, 41,050 bytes total				
B10B	1	987	12-30-96	2:41p	E10B	1	987	12-30-96	2:42p
B10B	2	269	12-30-96	2:41p	E10B	2	269	12-30-96	2:42p
B10B	3	2,763	12-30-96	2:41p	E10B	3	2,763	12-30-96	2:42p
B10B	4	2,763	12-30-96	2:41p	E10B	4	2,763	12-30-96	2:42p
B10B	5	1,611	12-30-96	2:41p	E10B	5	1,611	12-30-96	2:42p
B10B	6	1,611	12-30-96	2:41p	E10B	6	1,611	12-30-96	2:42p
B10B	7	1,607	12-30-96	2:41p	E10B	7	1,607	12-30-96	2:42p
B10B	8	1,607	12-30-96	2:41p	E10B	8	1,607	12-30-96	2:42p
B10B	9	346	01-06-97	4:15p	E10B	9	346	01-06-97	4:15p
B10B	10	859	01-09-97	9:00a	E10B	10	859	01-09-97	9:01a
					E10B	17	6,102	12-30-96	2:42p
					E10B	18	6,102	12-30-96	2:42p

Table 11. Disk Table of Contents (Sheet 2 of 4)

File Name					File Name				
Base		Ext.	Size (bytes)	Creation Date Time	Base		Ext.	Size (bytes)	Creation Date Time
Directory of 10C-1					21 files, 40,109 bytes total				
B10C-1	1		989	12-30-96 2:43p	E10C-1	1		989	12-30-96 2:43p
B10C-1	2		271	12-30-96 2:43p	E10C-1	2		271	12-30-96 2:43p
B10C-1	3		2,767	12-30-96 2:43p	E10C-1	3		2,767	12-30-96 2:43p
B10C-1	4		2,767	12-30-96 2:43p	E10C-1	4		2,767	12-30-96 2:43p
B10C-1	5		1,615	12-30-96 2:43p	E10C-1	5		1,615	12-30-96 2:43p
B10C-1	6		1,615	12-30-96 2:43p	E10C-1	6		1,615	12-30-96 2:43p
B10C-1	7		1,611	12-30-96 2:43p	E10C-1	7		1,611	12-30-96 2:43p
B10C-1	8		1,611	12-30-96 2:43p	E10C-1	8		1,611	12-30-96 2:43p
B10C-1	9		350	01-06-97 4:25p	E10C-1	9		350	01-06-97 4:26p
B10C-1	10		709	04-09-97 4:55p	E10C-1	17		6,104	12-30-96 2:43p
					E10C-1	18		6,104	12-30-96 2:43p
Directory of 10C-3					21 files, 40,108 bytes total				
B10C-3	1		989	12-30-96 2:44p	E10C-3	1		989	12-30-96 2:46p
B10C-3	2		271	12-30-96 2:44p	E10C-3	2		271	12-30-96 2:46p
B10C-3	3		2,767	12-30-96 2:44p	E10C-3	3		2,767	12-30-96 2:46p
B10C-3	4		2,767	12-30-96 2:44p	E10C-3	4		2,767	12-30-96 2:46p
B10C-3	5		1,615	12-30-96 2:44p	E10C-3	5		1,615	12-30-96 2:46p
B10C-3	6		1,615	12-30-96 2:44p	E10C-3	6		1,615	12-30-96 2:46p
B10C-3	7		1,611	12-30-96 2:44p	E10C-3	7		1,611	12-30-96 2:46p
B10C-3	8		1,611	12-30-96 2:44p	E10C-3	8		1,611	12-30-96 2:46p
B10C-3	9		350	01-06-97 4:28p	E10C-3	9		350	01-06-97 4:29p
					E10C-3	10		708	01-09-97 9:02a
					E10C-3	17		6,104	12-30-96 2:46p
					E10C-3	18		6,104	12-30-96 2:46p
Directory of 11A-1					12 files, 26,514 bytes total				
B11A-1	1		989	12-30-96 2:49p	B11A-1	7		1,611	12-30-96 2:49p
B11A-1	2		271	12-30-96 2:49p	B11A-1	8		1,611	12-30-96 2:49p
B11A-1	3		2,767	12-30-96 2:49p	B11A-1	9		350	01-06-97 4:31p
B11A-1	4		2,767	12-30-96 2:49p	B11A-1	10		710	01-13-97 10:35p
B11A-1	5		1,615	12-30-96 2:49p	E11A-1	17		6,104	12-30-96 2:49p
B11A-1	6		1,615	12-30-96 2:49p	E11A-1	18		6,104	12-30-96 2:49p
Directory of 11A-2					11 files, 25,804 bytes total				
B11A-2	1		989	12-30-96 2:50p	B11A-2	7		1,611	12-30-96 2:50p
B11A-2	2		271	12-30-96 2:50p	B11A-2	8		1,611	12-30-96 2:50p
B11A-2	3		2,767	12-30-96 2:50p	B11A-2	9		350	01-06-97 4:32p
B11A-2	4		2,767	12-30-96 2:50p	E11A-2	17		6,104	12-30-96 2:51p
B11A-2	5		1,615	12-30-96 2:50p	E11A-2	18		6,104	12-30-96 2:51p
B11A-2	6		1,615	12-30-96 2:50p					
Directory of 11A-3					21 files, 40,110 bytes total				
B11A-3	1		989	12-30-96 2:52p	E11A-3	1		989	12-30-96 2:52p
B11A-3	2		271	12-30-96 2:52p	E11A-3	2		271	12-30-96 2:52p
B11A-3	3		2,767	12-30-96 2:52p	E11A-3	3		2,767	12-30-96 2:52p
B11A-3	4		2,767	12-30-96 2:52p	E11A-3	4		2,767	12-30-96 2:52p
B11A-3	5		1,615	12-30-96 2:52p	E11A-3	5		1,615	12-30-96 2:52p
B11A-3	6		1,615	12-30-96 2:52p	E11A-3	6		1,615	12-30-96 2:52p
B11A-3	7		1,611	12-30-96 2:52p	E11A-3	7		1,611	12-30-96 2:52p
B11A-3	8		1,611	12-30-96 2:52p	E11A-3	8		1,611	12-30-96 2:52p
B11A-3	9		350	01-06-97 4:34p	E11A-3	9		350	01-06-97 4:34p
					E11A-3	10		710	01-13-97 10:36p
					E11A-3	17		6,104	12-30-96 2:52p
					E11A-3	18		6,104	12-30-96 2:52p

Table 11. Disk Table of Contents (Sheet 3 of 4)

File Name					File Name				
Base		Size (bytes)	Creation		Base		Size (bytes)	Creation	
Ext.	Date		Time	Ext.	Date	Time			
Directory of 11B-1					22 files, 40,820 bytes total				
B11B-1	1	989	12-30-96	2:53p	E11B-1	1	989	12-30-96	2:53p
B11B-1	2	271	12-30-96	2:53p	E11B-1	2	271	12-30-96	2:53p
B11B-1	3	2,767	12-30-96	2:53p	E11B-1	3	2,767	12-30-96	2:53p
B11B-1	4	2,767	12-30-96	2:53p	E11B-1	4	2,767	12-30-96	2:53p
B11B-1	5	1,615	12-30-96	2:53p	E11B-1	5	1,615	12-30-96	2:53p
B11B-1	6	1,615	12-30-96	2:53p	E11B-1	6	1,615	12-30-96	2:53p
B11B-1	7	1,611	12-30-96	2:53p	E11B-1	7	1,611	12-30-96	2:53p
B11B-1	8	1,611	12-30-96	2:53p	E11B-1	8	1,611	12-30-96	2:53p
B11B-1	9	350	01-06-97	4:36p	E11B-1	9	350	01-06-97	4:37p
B11B-1	10	710	01-14-97	7:35p	E11B-1	10	710	01-14-97	7:40p
					E11B-1	17	6,104	12-30-96	2:53p
					E11B-1	18	6,104	12-30-96	2:53p
Directory of 11B-2					22 files, 40,821 bytes total				
B11B-2	1	989	12-30-96	2:54p	E11B-2	1	989	12-30-96	2:56p
B11B-2	2	271	12-30-96	2:54p	E11B-2	2	271	12-30-96	2:56p
B11B-2	3	2,767	12-30-96	2:54p	E11B-2	3	2,767	12-30-96	2:56p
B11B-2	4	2,767	12-30-96	2:54p	E11B-2	4	2,767	12-30-96	2:56p
B11B-2	5	1,615	12-30-96	2:54p	E11B-2	5	1,615	12-30-96	2:56p
B11B-2	6	1,615	12-30-96	2:54p	E11B-2	6	1,615	12-30-96	2:56p
B11B-2	7	1,611	12-30-96	2:54p	E11B-2	7	1,611	12-30-96	2:56p
B11B-2	8	1,611	12-30-96	2:54p	E11B-2	8	1,611	12-30-96	2:56p
B11B-2	9	350	01-06-97	4:38p	E11B-2	9	350	01-06-97	4:39p
B11B-2	10	711	01-16-97	1:26p	E11B-2	10	710	01-14-97	8:04p
					E11B-2	17	6,104	12-30-96	2:56p
					E11B-2	18	6,104	12-30-96	2:56p
Directory of 11C					22 files, 40,744 bytes total				
B11C	1	987	12-30-96	2:57p	E11C	1	987	12-30-96	2:57p
B11C	2	269	12-30-96	2:57p	E11C	2	269	12-30-96	2:57p
B11C	3	2,763	12-30-96	2:57p	E11C	3	2,763	12-30-96	2:57p
B11C	4	2,763	12-30-96	2:57p	E11C	4	2,763	12-30-96	2:57p
B11C	5	1,611	12-30-96	2:57p	E11C	5	1,611	12-30-96	2:57p
B11C	6	1,611	12-30-96	2:57p	E11C	6	1,611	12-30-96	2:57p
B11C	7	1,607	12-30-96	2:57p	E11C	7	1,607	12-30-96	2:57p
B11C	8	1,607	12-30-96	2:57p	E11C	8	1,607	12-30-96	2:57p
B11C	9	346	01-06-97	4:40p	E11C	9	346	01-06-97	4:41p
B11C	10	706	01-15-97	7:23p	E11C	10	706	01-15-97	7:28p
					E11C	17	6,102	12-30-96	2:57p
					E11C	18	6,102	12-30-96	2:57p
Directory of 12A-1					22 files, 40,820 bytes total				
B12A-1	1	989	12-30-96	2:57p	E12A-1	1	989	12-30-96	2:58p
B12A-1	2	271	12-30-96	2:57p	E12A-1	2	271	12-30-96	2:58p
B12A-1	3	2,767	12-30-96	2:57p	E12A-1	3	2,767	12-30-96	2:58p
B12A-1	4	2,767	12-30-96	2:57p	E12A-1	4	2,767	12-30-96	2:58p
B12A-1	5	1,615	12-30-96	2:57p	E12A-1	5	1,615	12-30-96	2:58p
B12A-1	6	1,615	12-30-96	2:57p	E12A-1	6	1,615	12-30-96	2:58p
B12A-1	7	1,611	12-30-96	2:57p	E12A-1	7	1,611	12-30-96	2:58p
B12A-1	8	1,611	12-30-96	2:57p	E12A-1	8	1,611	12-30-96	2:58p
B12A-1	9	350	01-06-97	4:42p	E12A-1	9	350	01-06-97	4:42p
B12A-1	10	710	01-16-97	1:34p	E12A-1	10	710	01-16-97	1:35p
					E12A-1	17	6,104	12-30-96	2:58p
					E12A-1	18	6,104	12-30-96	2:58p

Table 11. Disk Table of Contents (Sheet 4 of 4)

File Name					File Name				
Base Ext.		Size (bytes)	Creation Date Time		Base Ext.		Size (bytes)	Creation Date Time	
Directory of 12A-2					22 files, 40,820 bytes total				
B12A-2	1	989	12-30-96	2:58p	E12A-2	1	989	12-30-96	2:59p
B12A-2	2	271	12-30-96	2:58p	E12A-2	2	271	12-30-96	2:59p
B12A-2	3	2,767	12-30-96	2:58p	E12A-2	3	2,767	12-30-96	2:59p
B12A-2	4	2,767	12-30-96	2:58p	E12A-2	4	2,767	12-30-96	2:59p
B12A-2	5	1,615	12-30-96	2:58p	E12A-2	5	1,615	12-30-96	2:59p
B12A-2	6	1,615	12-30-96	2:58p	E12A-2	6	1,615	12-30-96	2:59p
B12A-2	7	1,611	12-30-96	2:58p	E12A-2	7	1,611	12-30-96	2:59p
B12A-2	8	1,611	12-30-96	2:58p	E12A-2	8	1,611	12-30-96	2:59p
B12A-2	9	350	01-06-97	4:43p	E12A-2	9	350	01-06-97	4:44p
B12A-2	10	710	01-16-97	1:36p	E12A-2	10	710	01-16-97	1:37p
					E12A-2	17	6,104	12-30-96	2:59p
					E12A-2	18	6,104	12-30-96	2:59p
Directory of 12B-1					22 files, 40,402 bytes total				
B12B-1	1	989	12-30-96	3:00p	E12B-1	1	989	12-30-96	3:00p
B12B-1	2	271	12-30-96	3:00p	E12B-1	2	271	12-30-96	3:00p
B12B-1	3	2,767	12-30-96	3:00p	E12B-1	3	2,767	12-30-96	3:00p
B12B-1	4	2,767	12-30-96	3:00p	E12B-1	4	2,767	12-30-96	3:00p
B12B-1	5	1,615	12-30-96	3:00p	E12B-1	5	1,615	12-30-96	3:00p
B12B-1	6	1,615	12-30-96	3:00p	E12B-1	6	1,615	12-30-96	3:00p
B12B-1	7	1,611	12-30-96	3:00p	E12B-1	7	1,611	12-30-96	3:00p
B12B-1	8	1,611	12-30-96	3:00p	E12B-1	8	1,611	12-30-96	3:00p
B12B-1	9	350	01-06-97	4:46p	E12B-1	9	350	01-06-97	4:46p
B12B-1	10	501	01-16-97	1:37p	E12B-1	10	501	01-16-97	1:38p
					E12B-1	17	6,104	12-30-96	3:00p
					E12B-1	18	6,104	12-30-96	3:00p
Directory of 12B-2					22 files, 40,402 bytes total				
B12B-2	1	989	12-30-96	3:00p	E12B-2	1	989	12-30-96	3:01p
B12B-2	2	271	12-30-96	3:00p	E12B-2	2	271	12-30-96	3:01p
B12B-2	3	2,767	12-30-96	3:00p	E12B-2	3	2,767	12-30-96	3:01p
B12B-2	4	2,767	12-30-96	3:00p	E12B-2	4	2,767	12-30-96	3:01p
B12B-2	5	1,615	12-30-96	3:00p	E12B-2	5	1,615	12-30-96	3:01p
B12B-2	6	1,615	12-30-96	3:00p	E12B-2	6	1,615	12-30-96	3:01p
B12B-2	7	1,611	12-30-96	3:00p	E12B-2	7	1,611	12-30-96	3:01p
B12B-2	8	1,611	12-30-96	3:00p	E12B-2	8	1,611	12-30-96	3:01p
B12B-2	9	350	01-06-97	4:47p	E12B-2	9	350	01-06-97	4:47p
B12B-2	10	501	01-16-97	1:39p	E12B-2	10	501	01-16-97	2:00p
					E12B-2	17	6,104	12-30-96	3:01p
					E12B-2	18	6,104	12-30-96	3:01p

4.0 Data Tables for each Cycle

4.1 Cycle 10A-1

Table B10A-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10A-1

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	2.246E-02	4.196E+00	1.709E-02	4.235E+00
1404	7.618E-02	4.933E+00	4.233E-02	5.052E+00
1405	8.659E-03	4.127E+00	6.616E-03	4.143E+00
1505	1.088E-02	3.800E+00	6.491E-03	3.818E+00
1507	9.496E-03	3.586E+00	7.131E-03	3.602E+00
1606	5.669E-03	3.720E+00	4.286E-03	3.730E+00
1607	8.989E-03	3.110E+00	6.475E-03	3.126E+00
2507	2.106E-02	3.963E+00	1.649E-02	4.001E+00
2405	5.745E-02	4.173E+00	3.298E-02	4.264E+00
2506	9.759E-03	3.659E+00	6.848E-03	3.676E+00
2508	9.327E-03	4.376E+00	6.847E-03	4.392E+00
2607	6.612E-03	3.376E+00	4.948E-03	3.388E+00
2608	1.328E-02	3.186E+00	1.062E-02	3.210E+00
2609	8.462E-02	2.998E+00	4.569E-02	3.128E+00

Table B10A-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10A-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	3.006E+15	1.951E+15
MFA-2	2507	2.836E+15	1.821E+15

Table B10A-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6526E-02	1.3341E-02	0.0000E+00
-92.78	5.7045E-02	2.5782E-02	0.0000E+00
-87.78	9.1548E-02	4.1301E-02	0.0000E+00
-82.78	1.3267E-01	6.1694E-02	0.0000E+00
-77.78	1.8310E-01	8.9179E-02	0.0000E+00
-72.15	2.4031E-01	1.2480E-01	0.0000E+00
-65.90	2.9764E-01	1.6976E-01	0.0000E+00
-60.35	3.5878E-01	2.3041E-01	1.6617E-02
-55.49	4.4025E-01	3.1379E-01	2.4379E-02
-50.62	5.3615E-01	4.2430E-01	3.7703E-02
-47.17	6.1441E-01	5.3037E-01	5.4264E-02
-43.58	6.9713E-01	6.5148E-01	7.3365E-01
-38.45	8.1621E-01	7.9755E-01	8.2583E-01
-33.32	9.2677E-01	9.2234E-01	9.2756E-01
-28.20	1.0236E+00	1.0268E+00	1.0207E+00
-23.07	1.1043E+00	1.1116E+00	1.0995E+00
-17.94	1.1673E+00	1.1768E+00	1.1613E+00
-12.82	1.2115E+00	1.2220E+00	1.2047E+00
-7.69	1.2365E+00	1.2476E+00	1.2293E+00
-2.56	1.2421E+00	1.2534E+00	1.2347E+00
2.56	1.2284E+00	1.2397E+00	1.2209E+00
7.69	1.1955E+00	1.2068E+00	1.1882E+00
12.82	1.1445E+00	1.1555E+00	1.1376E+00
17.94	1.0769E+00	1.0873E+00	1.0706E+00
23.07	9.9430E-01	1.0030E+00	9.8896E-01
28.20	8.9899E-01	9.0449E-01	8.9515E-01
33.32	7.9329E-01	7.9301E-01	7.9209E-01
38.45	6.7981E-01	6.6873E-01	6.8447E-01
43.58	5.6299E-01	5.3189E-01	5.8471E-01
47.17	4.8378E-01	4.2522E-01	4.3606E-02
50.62	4.0918E-01	3.3194E-01	2.9525E-02
55.49	3.1815E-01	2.3509E-01	1.8093E-02
60.35	2.3997E-01	1.6184E-01	1.1296E-02
64.98	1.9222E-01	1.2052E-01	0.0000E+00
69.39	1.6460E-01	9.8965E-02	0.0000E+00
76.46	1.2535E-01	7.0195E-02	0.0000E+00
86.80	8.1928E-02	4.2306E-02	0.0000E+00
98.14	4.7337E-02	2.3110E-02	0.0000E+00
110.00	2.0307E-02	1.0362E-02	0.0000E+00

Table B10A-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5594E-02	1.2927E-02	0.0000E+00
-92.78	5.5013E-02	2.4935E-02	0.0000E+00
-87.78	8.8199E-02	3.9859E-02	0.0000E+00
-82.78	1.2771E-01	5.9417E-02	0.0000E+00
-77.78	1.7617E-01	8.5771E-02	0.0000E+00
-72.15	2.3120E-01	1.2002E-01	0.0000E+00
-65.90	2.8707E-01	1.6387E-01	0.0000E+00
-60.35	3.4727E-01	2.2388E-01	1.6431E-02
-55.49	4.2863E-01	3.0663E-01	2.4217E-02
-50.62	5.2581E-01	4.1680E-01	3.7476E-02
-47.17	6.0568E-01	5.2258E-01	5.3907E-02
-43.58	6.8985E-01	6.4366E-01	7.2306E-01
-38.45	8.0993E-01	7.9061E-01	8.1912E-01
-33.32	9.2109E-01	9.1643E-01	9.2189E-01
-28.20	1.0184E+00	1.0219E+00	1.0154E+00
-23.07	1.0999E+00	1.1079E+00	1.0949E+00
-17.94	1.1639E+00	1.1743E+00	1.1578E+00
-12.82	1.2092E+00	1.2207E+00	1.2025E+00
-7.69	1.2352E+00	1.2471E+00	1.2281E+00
-2.56	1.2415E+00	1.2537E+00	1.2342E+00
2.56	1.2283E+00	1.2406E+00	1.2210E+00
7.69	1.1963E+00	1.2084E+00	1.1892E+00
12.82	1.1466E+00	1.1583E+00	1.1400E+00
17.94	1.0806E+00	1.0913E+00	1.0748E+00
23.07	9.9947E-01	1.0081E+00	9.9473E-01
28.20	9.0506E-01	9.1006E-01	9.0196E-01
33.32	7.9976E-01	7.9844E-01	7.9937E-01
38.45	6.8613E-01	6.7337E-01	6.9155E-01
43.58	5.6869E-01	5.3526E-01	5.9037E-01
47.17	4.8861E-01	4.2753E-01	4.4266E-02
50.62	4.1312E-01	3.3359E-01	3.0062E-02
55.49	3.2164E-01	2.3629E-01	1.8544E-02
60.35	2.4413E-01	1.6316E-01	1.1680E-02
64.98	1.9720E-01	1.2185E-01	0.0000E+00
69.39	1.6933E-01	1.0004E-01	0.0000E+00
76.46	1.2922E-01	7.0908E-02	0.0000E+00
86.80	8.4577E-02	4.2724E-02	0.0000E+00
98.14	4.8841E-02	2.3310E-02	0.0000E+00
110.00	2.0742E-02	1.0361E-02	0.0000E+00

Table B10A-1.5. Fission Power Distribution by Pin in MFA-1 at BOC 10A-1

CORE POSITION 1506

[illegible]

Table B10A-1.6. Fission Power Distribution by Pin in MFA-2 at BOC 10A-1

CORE POSITION 2507

	1.082	1.066	1.049	1.032	1.015	0.997	0.979	0.961						
	1.088	1.073	1.057	1.040	1.023	1.005	0.988	0.969	0.951					
	1.094	1.079	1.063	1.047	1.030	1.013	0.995	0.978	0.959	0.941				
	1.099	1.084	1.069	1.053	1.037	1.020	1.003	0.985	0.967	0.949	0.931			
	1.103	1.089	1.074	1.058	1.042	1.026	1.009	0.992	0.974	0.956	0.938	0.920		
	1.107	1.093	1.078	1.063	1.047	1.031	1.014	0.997	0.980	0.962	0.944	0.926	0.908	
	1.110	1.096	1.082	1.067	1.052	1.036	1.019	1.002	0.985	0.968	0.950	0.932	0.914	0.896
1.113	1.099	1.085	1.070	1.055	1.039	1.023	1.007	0.990	0.972	0.955	0.937	0.919	0.901	0.883
	1.102	1.088	1.073	1.058	1.042	1.027	1.010	0.993	0.976	0.959	0.941	0.923	0.906	0.888
	1.089	1.075	1.060	1.045	1.029	1.013	0.996	0.980	0.962	0.945	0.927	0.909	0.892	
	1.076	1.062	1.047	1.031	1.015	0.999	0.982	0.965	0.948	0.930	0.913	0.895		
	1.063	1.048	1.033	1.017	1.001	0.984	0.967	0.950	0.933	0.915	0.898			
	1.049	1.033	1.018	1.002	0.985	0.969	0.952	0.934	0.917	0.900				
	1.034	1.018	1.002	0.986	0.969	0.953	0.936	0.919	0.901					
	1.018	1.002	0.986	0.970	0.953	0.936	0.919	0.902						

Table B10A-1.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10A-1

CORE POSITION 1506

	0.886	0.891	0.897	0.901	0.905	0.908	0.911	0.913	
	0.899	0.905	0.911	0.916	0.920	0.924	0.927	0.929	0.931
	0.912	0.919	0.925	0.930	0.935	0.939	0.942	0.945	0.947
	0.923	0.931	0.937	0.943	0.948	0.953	0.956	0.959	0.962
	0.934	0.942	0.949	0.955	0.961	0.966	0.970	0.973	0.976
	0.944	0.952	0.960	0.966	0.972	0.978	0.982	0.986	0.989
	0.953	0.961	0.969	0.977	0.983	0.989	0.994	0.998	1.002
0.960	0.970	0.978	0.986	0.993	0.999	1.005	1.009	1.013	1.017
	0.977	0.986	0.994	1.002	1.009	1.015	1.020	1.024	1.028
	0.993	1.002	1.010	1.017	1.024	1.029	1.034	1.038	1.041
	1.008	1.017	1.025	1.032	1.038	1.043	1.047	1.051	1.054
	1.023	1.031	1.039	1.045	1.051	1.056	1.060	1.063	1.066
	1.037	1.045	1.052	1.059	1.064	1.068	1.072	1.075	1.076
	1.051	1.058	1.065	1.071	1.076	1.080	1.083	1.085	1.086
	1.063	1.071	1.077	1.082	1.087	1.090	1.093	1.095	

Table B10A-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10A-1

CORE POSITION 2507

	1.080	1.064	1.048	1.031	1.014	0.995	0.976	0.957						
	1.087	1.072	1.056	1.040	1.023	1.005	0.986	0.967	0.947					
	1.094	1.079	1.064	1.048	1.031	1.014	0.996	0.977	0.957	0.937				
	1.100	1.086	1.071	1.055	1.039	1.022	1.004	0.985	0.966	0.946	0.926			
	1.105	1.091	1.077	1.061	1.045	1.028	1.011	0.993	0.974	0.955	0.935	0.914		
	1.110	1.096	1.082	1.067	1.051	1.034	1.017	0.999	0.981	0.962	0.942	0.922	0.901	
	1.114	1.100	1.086	1.071	1.056	1.039	1.023	1.005	0.987	0.968	0.949	0.929	0.908	0.887
1.117	1.103	1.090	1.075	1.060	1.044	1.027	1.010	0.992	0.974	0.954	0.935	0.915	0.894	0.872
	1.106	1.092	1.078	1.063	1.047	1.031	1.014	0.996	0.978	0.959	0.940	0.920	0.899	0.878
	1.094	1.080	1.065	1.050	1.033	1.017	0.999	0.981	0.963	0.944	0.924	0.904	0.883	
	1.081	1.067	1.051	1.035	1.019	1.001	0.984	0.965	0.947	0.927	0.907	0.887		
	1.068	1.052	1.036	1.020	1.003	0.985	0.967	0.949	0.929	0.910	0.890			
	1.052	1.037	1.020	1.003	0.986	0.968	0.950	0.931	0.911	0.891				
	1.036	1.020	1.003	0.986	0.968	0.950	0.931	0.912	0.892					
	1.019	1.002	0.985	0.967	0.949	0.930	0.911	0.892						

Table B10A-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10A-1

Side	Flux > 0.1 MeV (n/cm^2 -sec)	
	MFA-1	MFA-2
E	1.9719E+15	1.9751E+15
SE	1.7724E+15	2.0325E+15
SW	1.7082E+15	1.8566E+15
W	1.8752E+15	1.6328E+15
NW	2.0845E+15	1.5643E+15
NE	2.1367E+15	1.7117E+15

Table B10A-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10A-1

CORE POS.	OUTLET TEMP. (DEG F)		FLOW RATE (LB/H)
	MEASURED	CALCULATED	
1506	1054	1085	116330
1404	927	925	228160
1405	901	901	210640
1505	893	881	210640
1507	884	872	210640
1606	915	916	172740
1607	882	883	172740
2507	1049	1058	116330
2405	929	918	194730
2506	891	879	200300
2508	920	906	210640
2607	914	899	165660
2608	1078	1056	89760
2609	892	883	175430

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B10A-1.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10A-1

TEMPERATURE MAP FOR BUNDLE A2	ASSEMBLY	NO. 1306	MFA-1
AXIAL HEIGHT	43-940 IN	591	
527	935	928	949 953 965 966 975 984 986 987 988 989
962	970	973	974 975 976 977 978 979 980 981 982 983
915 916	963 1024	1042 1045	1046 1047 1048 1049 1050 1051 1052 1053 1054 1055
517 543	967 1040	1056 1112	1113 1114 1115 1116 1117 1118 1119 1120 1121 1122
515 546	971 1045	1103 1128	1129 1130 1131 1132 1133 1134 1135 1136 1137 1138
920 546	975 1046	1109 1130	1131 1132 1133 1134 1135 1136 1137 1138 1139 1140
520 949	977 1050	1131 1133	1134 1135 1136 1137 1138 1139 1140 1141 1142 1143
315 949	979 1050	1132 1144	1145 1146 1147 1148 1149 1150 1151 1152 1153 1154
516 946	976 1025	1147 1150	1151 1152 1153 1154 1155 1156 1157 1158 1159 1160
531 920	968	1144 1147	1148 1149 1150 1151 1152 1153 1154 1155 1156 1157
570 1024	1108 1136	1167 1180	1181 1182 1183 1184 1185 1186 1187 1188 1189 1190
589 925	1073 1126	1144 1150	1151 1152 1153 1154 1155 1156 1157 1158 1159 1160
502 535	974 1051	1120 1124	1125 1126 1127 1128 1129 1130 1131 1132 1133 1134
525 543	975 1059	1126 1170	1171 1172 1173 1174 1175 1176 1177 1178 1179 1180
907 546	982 1064	1131 1155	1156 1157 1158 1159 1160 1161 1162 1163 1164 1165
905 540	988 1068	1135 1158	1159 1160 1161 1162 1163 1164 1165 1166 1167 1168
910 521	991 1076	1131 1151	1152 1153 1154 1155 1156 1157 1158 1159 1160 1161
918 920	990 1076	1097 1106	1107 1108 1109 1110 1111 1112 1113 1114 1115 1116
922 946	992 1076	1081 1084	1085 1086 1087 1088 1089 1090 1091 1092 1093
941	992 957	961 964	965 966 967 968 969 970 971 972 973
899	917 921	923 925	926 927 928 929 930 931 932 933 934 935

N

Table B10A-1.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10A-1

TEMPERATURE MAP FOR BUNDLE 52 ASSEMBLY NO. 2507 MFA-2																
AXIAL HEIGHT 43.540 IN	892	901	901	900	898	895	891	888	880							
	929	937	937	935	931	927	923	918	913							
	966	972	973	969	964	959	954	948	946							
	1035	1047	1045	1040	1034	1026	1009									
910 940	569	1035	1071	1074	1065	1064	1057	1045	1009	952	928	902				
	1075	1106	1108	1103	1097	1080	1078	1042								
914 945	576	1054	1108	1119	1115	1109	1103	1099	1075	1020	953	929	905			
	1086	1125	1130	1125	1119	1112	1104	1088	1045							
916 950	582	1061	1119	1133	1130	1124	1117	1111	1101	1078	1018	951	928	906		
	1091	1131	1137	1132	1125	1118	1112	1103	1086	1041						
918 953	587	1065	1124	1138	1135	1129	1122	1115	1108	1097	1073	1014	948	926	904	
	1094	1134	1140	1135	1128	1121	1114	1107	1098	1071	1037					
920 956	591	1068	1127	1141	1138	1132	1124	1117	1110	1103	1092	1068	1010	945	924	903
	1096	1137	1143	1138	1131	1123	1116	1109	1102	1093	1076	1031				
920 957	593	1068	1129	1144	1141	1134	1126	1119	1112	1105	1098	1087	1063	1005	943	922 901
	1090	1137	1145	1141	1133	1125	1118	1111	1104	1097	1088	1069	1022			
919 956	591	1052	1123	1144	1143	1137	1129	1121	1114	1107	1100	1092	1081	1053	992	941 521 895
902 943	583														947 940 933	
912 949	585	1051	1122	1143	1142	1136	1128	1120	1113	1106	1099	1091	1080	1053	995	953 566 579
	1088	1134	1143	1139	1131	1123	1116	1109	1102	1095	1086	1068	1024			
913 951	588	1064	1125	1139	1137	1130	1122	1115	1108	1101	1094	1084	1061	1009	957	971 984
	1092	1132	1138	1133	1126	1118	1111	1104	1097	1089	1072	1032				
915 952	590	1064	1120	1134	1131	1124	1117	1110	1103	1096	1086	1064	1013	959	974 969	
	1089	1126	1132	1127	1120	1113	1106	1099	1091	1075	1055					
911 951	590	1061	1115	1126	1125	1119	1112	1105	1098	1089	1067	1015	959	975 942		
	1084	1120	1126	1121	1115	1108	1101	1093	1077	1037						
909 949	588	1056	1108	1120	1118	1112	1105	1099	1090	1080	1016	958	976 955			
	1078	1112	1116	1112	1106	1100	1092	1077	1038							
906 946	585	1049	1095	1104	1101	1096	1080	1064	1018	956	976 952					
	1065	1092	1093	1089	1084	1078	1064	1034								
901 940	578	1030	1058	1061	1057	1053	1048	1037	1003	953	973 994					
	1025	1035	1034	1021	1027	1021	1005									
	969	967	967	967	966	964	961	956	951							
928	931	931	931	930	928	925	921									
886	895	895	894	893	891	888	886

Table B10A-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10A-1

[illegible]

Table B10A-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10A-1

TEMPERATURE MAP FOR BUNDLE 52	ASSEMBLY NO. 2507	MFA-2
AXIAL HEIGHT 50.466 IN.		
505	512 513 512 509 506 503 500 491	
	543 949 950 947 944 939 935 931 926	
	979 985 985 982 977 971 966 961 940	
523 553	1027 1039 1038 1035 1027 1014 1002	
	1027 1055 1064 1065 1046 1038 1002 945 939 932	
	1062 1056 1060 1056 1050 1083 1068 1032	
527 558	988 1046 1098 1112 1111 1105 1098 1066 1014 967 942 916	
	1075 1118 1127 1124 1118 1111 1102 1083 1037	
525 562	955 1053 1111 1130 1130 1124 1116 1110 1099 1071 1014 965 941 917	
	1084 1135 1136 1134 1127 1120 1113 1103 1068 1034	
532 566	1000 1056 1116 1137 1137 1131 1124 1117 1109 1097 1060 1010 962 940 917	
	1084 1129 1141 1138 1131 1124 1117 1109 1089 1077 1038	
523 569	1005 1041 1120 1140 1140 1134 1127 1120 1113 1105 1092 1063 1066 960 939 916	
	1086 1132 1144 1131 1124 1126 1119 1112 1104 1094 1072 1035	
533 571	1067 1060 1121 1133 1130 1122 1115 1108 1100 1064 1057 1001 960 938 918	
	1078 1130 1143 1136 1129 1121 1114 1107 1099 1058 1065 1011	
532 566	1045 1112 1141 1145 1139 1132 1124 1117 1110 1103 1064 1079 1046 990 961 936 914	
515 568	995	
524 562	1043 1111 1140 1144 1138 1131 1123 1116 1109 1102 1083 1079 1046 983 971 942 934	
	1076 1148 1143 1141 1134 1126 1115 1112 1105 1097 1066 1064 1018	
	1062 1117 1138 1133 1125 1118 1111 1103 1096 1083 1057 1076 976 987 959	
525 564	1062 1127 1136 1135 1129 1121 1114 1107 1100 1050 1064 1022	
	1058 1134 1133 1127 1120 1113 1105 1098 1086 1050 1032 977 950 1003	
525 565	1064 1122 1132 1129 1123 1116 1109 1102 1092 1072 1031	
	1065 1109 1127 1121 1115 1108 1100 1068 1062 1014 977 991 1006	
524 562	1065 1109 1127 1121 1115 1108 1100 1068 1062 1014 977 991 1006	
	1076 1116 1125 1123 1117 1110 1103 1094 1074 1052	
522 564	1064 1092 1101 1118 1112 1105 1095 1083 1063 1014 975 942 1004	
	1070 1106 1114 1111 1105 1099 1061 1073 1032	
515 560	1061 1044 1097 1099 1097 1092 1085 1077 1067 1011 973 951 1010	
	1056 1083 1087 1084 1079 1072 1059 1026	
514 555	991 1025 1048 1053 1060 1046 1047 1028 1000 945 988 1008	
	1020 1030 1020 1027 1024 1017 1001	
	956 983 982 982 981 980 977 971 968	
943	946 946 945 944 942 940 926 899	
899	909 908 907 906 904 902 899 851	

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Table B10A-1.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 10A-1

TEMPERATURE MAP FOR BUNDLE 52	ASSEMBLY NO. 2507	MFA-2
AXIAL HEIGHT	928	913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844 2845 2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859 2860 2861 2862 2863 2864 2865 2866 2867 2868 2869 2870 2871 2872 2873 2874 2875 2876 2877 2878 2879 2880 2881 2882 2883 2884 2885 2886 2887 2888 2889 2890 2891 2892 2893 2894 2895 2896 2897 2898 2899 2900 2901 2902 2903 2904 2905 2906 2907 2908 2909 2910 2911 2912 2913 2914 2915 2916 2917 2918 2919 2920 2921 2922 2923 2924 2925 2926 2927 2928 2929 2930 2931 2932 2933 2934 2935 2936 2937 2938 2939 2940 2941 2942 2943 2944 2945 2946 2947 2948 2949 2950 2951 2952 2953 2954 2955 2956 2957 2958 2959 2960 2961 2962 2963 2964 2965 2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979 2980 2981 2982 2983 2984 2985 2986 2987 2988 2989 2990 2991 2992 2993 2994 2995 2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3009 3010 3011 3012 3013 3014 3015 3016 3017 3018 3019 3020 3021 3022 3023 3024 3025 3026 3027 3028 3029 3030 3031 3032 3033 3034 3035 3036 3037 3038 3039 3040 3041 3042 3043 3044 3045 3046 3047 3048 3049 3050 3051 3052 3053 3054 3055 3056 3057 3058 3059 3060 3061 3062 3063 3064 3065 3066 3067 3068 3069 3070 3071 3072 3073 3074 3075 3076 3077 3078 3079 3080 3081 3082 3083 3084 3085 3086 3087 3088 3089 3090 3091 3092 3093 3094 3095 3096 3097 3098 3099 3100 3101 3102 3103 3104 3105 3106 3107 3108 3109 3110 3111 3112 3113 3114 3115 3116 3117 3118 3119 3120 3121 3122 3123 3124 3125 3126 3127 3128 3129 3130 3131 3132 3133 3134 3135 3136 3137 3138 3139 3140 3141 3142 3143 3144 3145 3146 3147 3148 3149 3150 3151 3152 3153 3154 3155 3156 3157 3158 3159 3160 3161 3162 3163 3164 3165 3166 3167 3168 3169 3170 3171 3172 3173 3174 3175 3176 3177 3178 3179 3180 3181 3182 3183 3184 3185 3186 3187 3188 3189 3190 3191 3192 3193 3194 3195 3196 3197 3198 3199 3200 3201 3202 3203 3204 3205 3206 3207 3208 3209 3210 3211 3212 3213 3214 3215 3216 3217 3218 3219 3220 3221 3222 3223 3224 3225 3226 3227 3228 3229 3230 3231 3232 3233 3234 3235 3236 3237 3238 3239 3240 3241 3242 3243 3244 3245 3246 3247 3248 3249 3250 3251 3252 3253 3254 3255 3256 3257 3258 3259 3260 3261 3262 3263 3264 3265 3266 3267 3268 3269 3270 3271 3272 3273 3274 3275 3276 3277 3278 3279 3280 3281 3282 3283 3284 3285 3286 3287 3288 3289 3290 3291 3292 3293 3294 3295 3296 3297 3298 3299 3300 3301 3302 3303 3304 3305 3306 3307 3308 3309 3310 3311 3312 3313 3314 3315 3316 3317 3318 3319 3320 3321 3322 3323 3324 3325 3326 3327 3328 3329 3330 3331 3332 3333 3334 3335 3336 3337 3338 3339 3340 3341 3342 3343 3344 3345 3346 3347 3348 3349 3350 3351 3352 3353 3354 3355 3356 3357 3358 3359 3360 3361 3362 3363 3364 336

Table E10A-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 10A-1

CORE POS.	* * * * *	POWER IN MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE
1506	2.758E-02	4.106E+00	2.092E-02
1404	8.078E-02	4.846E+00	4.798E-02
1405	9.261E-03	4.037E+00	7.469E-03
1505	1.121E-02	3.795E+00	7.296E-03
1507	9.750E-03	3.510E+00	7.821E-03
1606	6.117E-03	3.692E+00	4.921E-03
1607	9.165E-03	3.063E+00	7.099E-03
2507	2.522E-02	3.880E+00	1.995E-02
2405	6.120E-02	4.089E+00	3.771E-02
2506	1.013E-02	3.614E+00	7.616E-03
2508	9.791E-03	4.299E+00	7.682E-03
2607	6.923E-03	3.335E+00	5.509E-03
2608	1.574E-02	3.135E+00	1.288E-02
2609	8.413E-02	2.972E+00	4.964E-02
			3.106E+00

Table E10A-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 10A-1

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-1	1506	3.013E+15	1.945E+15
MFA-2	2507	2.840E+15	1.814E+15

Table E10A-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 10A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5837E-02	1.3075E-02	0.0000E+00
-92.78	5.5558E-02	2.5263E-02	0.0000E+00
-87.78	8.9146E-02	4.0461E-02	0.0000E+00
-82.78	1.2917E-01	6.0424E-02	0.0000E+00
-77.78	1.7822E-01	8.7325E-02	0.0000E+00
-72.15	2.3384E-01	1.2218E-01	0.0000E+00
-65.90	2.8951E-01	1.6617E-01	0.0000E+00
-60.35	3.4874E-01	2.2560E-01	2.3875E-02
-55.49	4.2772E-01	3.0667E-01	3.2031E-02
-50.62	5.2060E-01	4.1369E-01	4.5485E-02
-47.17	5.9628E-01	5.1612E-01	6.1785E-02
-43.58	6.7629E-01	6.3292E-01	7.1450E-01
-38.45	7.9201E-01	7.7461E-01	8.0485E-01
-33.32	9.0008E-01	8.9622E-01	9.0491E-01
-28.20	9.9561E-01	9.9876E-01	9.9138E-01
-23.07	1.0766E+00	1.0835E+00	1.0704E+00
-17.94	1.1414E+00	1.1503E+00	1.1339E+00
-12.82	1.1891E+00	1.1987E+00	1.1773E+00
-7.69	1.2194E+00	1.2295E+00	1.2070E+00
-2.56	1.2319E+00	1.2423E+00	1.2193E+00
2.56	1.2264E+00	1.2370E+00	1.2148E+00
7.69	1.2026E+00	1.2134E+00	1.1913E+00
12.82	1.1608E+00	1.1717E+00	1.1501E+00
17.94	1.1015E+00	1.1121E+00	1.0966E+00
23.07	1.0249E+00	1.0341E+00	1.0209E+00
28.20	9.3261E-01	9.3866E-01	9.2994E-01
33.32	8.2702E-01	8.2732E-01	8.3248E-01
38.45	7.1124E-01	7.0030E-01	7.2195E-01
43.58	5.9066E-01	5.5866E-01	6.1844E-01
47.17	5.0845E-01	4.4762E-01	5.1239E-02
50.62	4.3082E-01	3.5033E-01	3.6074E-02
55.49	3.3565E-01	2.4883E-01	2.3419E-02
60.35	2.5367E-01	1.7175E-01	1.5577E-02
64.98	2.0357E-01	1.2806E-01	0.0000E+00
69.39	1.7450E-01	1.0524E-01	0.0000E+00
76.46	1.3306E-01	7.4740E-02	0.0000E+00
86.80	8.7042E-02	4.5095E-02	0.0000E+00
98.14	5.0290E-02	2.4643E-02	0.0000E+00
110.00	2.1534E-02	1.1037E-02	0.0000E+00

Table E10A-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 10A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5014E-02	1.2714E-02	0.0000E+00
-92.78	5.3755E-02	2.4520E-02	0.0000E+00
-87.78	8.6170E-02	3.9187E-02	0.0000E+00
-82.78	1.2475E-01	5.8402E-02	0.0000E+00
-77.78	1.7203E-01	8.4284E-02	0.0000E+00
-72.15	2.2570E-01	1.1791E-01	0.0000E+00
-65.90	2.8013E-01	1.6097E-01	0.0000E+00
-60.35	3.3871E-01	2.1998E-01	2.2643E-02
-55.49	4.1782E-01	3.0072E-01	3.0807E-02
-50.62	5.1230E-01	4.0778E-01	4.4321E-02
-47.17	5.8983E-01	5.1029E-01	6.0658E-02
-43.58	6.7155E-01	6.2756E-01	7.0665E-01
-38.45	7.8864E-01	7.7056E-01	8.0111E-01
-33.32	8.9759E-01	8.9354E-01	9.0244E-01
-28.20	9.9383E-01	9.9728E-01	9.8976E-01
-23.07	1.0756E+00	1.0832E+00	1.0694E+00
-17.94	1.1414E+00	1.1511E+00	1.1340E+00
-12.82	1.1900E+00	1.2005E+00	1.1786E+00
-7.69	1.2208E+00	1.2317E+00	1.2088E+00
-2.56	1.2332E+00	1.2444E+00	1.2210E+00
2.56	1.2271E+00	1.2386E+00	1.2158E+00
7.69	1.2027E+00	1.2143E+00	1.1916E+00
12.82	1.1604E+00	1.1718E+00	1.1500E+00
17.94	1.1010E+00	1.1119E+00	1.0962E+00
23.07	1.0249E+00	1.0339E+00	1.0211E+00
28.20	9.3348E-01	9.3904E-01	9.3126E-01
33.32	8.2917E-01	8.2842E-01	8.3497E-01
38.45	7.1444E-01	7.0185E-01	7.2553E-01
43.58	5.9443E-01	5.6016E-01	6.2175E-01
47.17	5.1195E-01	4.4868E-01	5.1566E-02
50.62	4.3397E-01	3.5131E-01	3.6332E-02
55.49	3.3891E-01	2.4986E-01	2.3653E-02
60.35	2.5801E-01	1.7319E-01	1.5841E-02
64.98	2.0899E-01	1.2963E-01	0.0000E+00
69.39	1.7972E-01	1.0657E-01	0.0000E+00
76.46	1.3742E-01	7.5673E-02	0.0000E+00
86.80	9.0081E-02	4.5673E-02	0.0000E+00
98.14	5.2051E-02	2.4941E-02	0.0000E+00
110.00	2.2096E-02	1.1084E-02	0.0000E+00

Table E10A-1.5. Fission Power Distribution by Pin in MFA-1 at EOC 10A-1

CORE POSITION 1506

0.906	0.910	0.914	0.918	0.922	0.925	0.927	0.930												
0.917	0.922	0.926	0.930	0.934	0.937	0.940	0.943	0.945											
0.927	0.932	0.937	0.942	0.946	0.949	0.952	0.955	0.958	0.960										
0.937	0.943	0.948	0.952	0.957	0.961	0.964	0.967	0.970	0.972	0.974									
0.947	0.952	0.958	0.963	0.967	0.971	0.975	0.978	0.981	0.984	0.986	0.988								
0.955	0.961	0.967	0.972	0.977	0.981	0.985	0.989	0.992	0.995	0.997	0.999	1.001							
0.964	0.970	0.975	0.981	0.986	0.990	0.995	0.998	1.002	1.005	1.008	1.010	1.012	1.014						
0.971	0.977	0.983	0.989	0.994	0.999	1.003	1.007	1.011	1.014	1.017	1.020	1.023	1.025	1.026					
0.984	0.990	0.996	1.001	1.006	1.011	1.015	1.019	1.023	1.026	1.029	1.032	1.034	1.037						
0.997	1.002	1.008	1.013	1.018	1.022	1.026	1.030	1.034	1.037	1.040	1.043	1.046							
1.008	1.014	1.019	1.024	1.028	1.033	1.037	1.041	1.044	1.048	1.051	1.054								
1.019	1.024	1.029	1.034	1.038	1.043	1.047	1.051	1.054	1.058	1.061									
1.029	1.034	1.038	1.043	1.047	1.052	1.056	1.060	1.064	1.067										
1.038	1.043	1.047	1.052	1.056	1.060	1.065	1.069	1.073											
1.046	1.051	1.055	1.059	1.064	1.068	1.073	1.077												

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Table E10A-1.6. Fission Power Distribution by Pin in MFA-2 at EOC 10A-1

CORE POSITION 2507

	1.082	1.067	1.050	1.033	1.016	0.998	0.980	0.962						
	1.089	1.073	1.057	1.041	1.024	1.006	0.988	0.970	0.952					
	1.094	1.079	1.064	1.047	1.031	1.013	0.996	0.978	0.960	0.942				
	1.099	1.085	1.069	1.053	1.037	1.020	1.003	0.985	0.967	0.949	0.931			
	1.104	1.089	1.074	1.059	1.042	1.026	1.009	0.992	0.974	0.956	0.938	0.920		
	1.108	1.093	1.078	1.063	1.047	1.031	1.014	0.997	0.980	0.962	0.944	0.926	0.908	
	1.111	1.097	1.082	1.067	1.052	1.035	1.019	1.002	0.985	0.967	0.950	0.932	0.914	0.896
1.114	1.100	1.085	1.070	1.055	1.039	1.023	1.006	0.989	0.972	0.954	0.937	0.919	0.901	0.883
	1.102	1.088	1.073	1.058	1.042	1.026	1.010	0.993	0.976	0.958	0.941	0.923	0.905	0.887
	1.090	1.075	1.060	1.045	1.029	1.013	0.996	0.979	0.962	0.944	0.927	0.909	0.891	
	1.077	1.062	1.047	1.031	1.015	0.998	0.982	0.965	0.947	0.930	0.912	0.894		
	1.063	1.048	1.033	1.017	1.000	0.984	0.967	0.949	0.932	0.915	0.897			
	1.049	1.033	1.018	1.001	0.985	0.968	0.951	0.934	0.917	0.899				
	1.034	1.018	1.002	0.986	0.969	0.952	0.935	0.918	0.901					
	1.018	1.002	0.986	0.970	0.953	0.936	0.919	0.902						

Table E10A-1.7. Fast Flux Distribution by Pin in MFA-1 at EOC 10A-1

CORE POSITION 1506

	0.886	0.892	0.896	0.900	0.904	0.906	0.909	0.910						
	0.900	0.906	0.911	0.915	0.919	0.922	0.925	0.927	0.928					
	0.913	0.919	0.925	0.930	0.934	0.937	0.940	0.943	0.944	0.945				
	0.926	0.932	0.938	0.943	0.948	0.952	0.955	0.958	0.960	0.961	0.962			
	0.937	0.944	0.950	0.956	0.961	0.965	0.969	0.972	0.974	0.976	0.977	0.977		
	0.947	0.955	0.961	0.967	0.973	0.978	0.982	0.985	0.988	0.990	0.991	0.992	0.992	
	0.956	0.964	0.972	0.978	0.984	0.989	0.994	0.997	1.000	1.003	1.004	1.006	1.006	1.006
0.965	0.973	0.981	0.988	0.994	1.000	1.005	1.009	1.012	1.015	1.017	1.018	1.019	1.019	1.019
0.981	0.990	0.997	1.004	1.010	1.015	1.020	1.024	1.027	1.029	1.031	1.031	1.032	1.031	
0.997	1.005	1.013	1.019	1.025	1.030	1.034	1.037	1.040	1.042	1.043	1.044	1.044		
1.013	1.020	1.027	1.033	1.039	1.044	1.047	1.050	1.053	1.054	1.055	1.055			
1.027	1.035	1.041	1.047	1.052	1.056	1.060	1.062	1.064	1.065	1.066				
1.041	1.048	1.055	1.060	1.065	1.069	1.072	1.074	1.075	1.076					
1.054	1.061	1.067	1.072	1.077	1.080	1.082	1.084	1.085						
1.067	1.073	1.079	1.084	1.088	1.090	1.093	1.094							

Table E10A-1.8. Fast Flux Distribution by Pin in MFA-2 at EOC 10A-1

CORE POSITION 2507

[illegible]

Table E10A-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 10A-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.9763E+15	1.9693E+15
SE	1.7725E+15	2.0264E+15
SW	1.7004E+15	1.8524E+15
W	1.8632E+15	1.6275E+15
NW	2.0730E+15	1.5572E+15
NE	2.1323E+15	1.7056E+15

Table E10A-1.10. Assembly Outlet Temperatures and
Flow Rates at EOC 10A-1

CORE	CALCULATED OUTLET TEMP.	FLOW RATE
POS.	(DEG F)	(LB/H)
1506	1077	116330
1404	922	228160
1405	894	210640
1505	884	210640
1507	868	210640
1606	918	172740
1607	880	172740
2507	1038	116330
2405	907	194730
2506	872	200300
2508	895	210640
2607	890	165660
2608	1038	89760
2609	875	175430

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E10A-1.17. Composition of MFA-1 at EOC 10A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3640E-05
			U-238	7.0573E-03	7.0320E-03
			Pu-239	0.0000E+00	2.3413E-05
			Pu-240	0.0000E+00	1.1763E-07
			FP	0.0000E+00	2.0932E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	1.0487E-05
			U-238	4.4499E-03	4.4303E-03
			Pu-239	1.7520E-03	1.7120E-03
			Pu-240	2.2340E-04	2.3125E-04
			Pu-241	1.9280E-05	1.9796E-05
			Pu-242	4.7430E-06	4.7827E-06
			Am-241	7.6680E-07	9.1173E-07
			FP	0.0000E+00	5.1188E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	1.0398E-05
			U-238	4.4499E-03	4.4249E-03
			Pu-239	1.7520E-03	1.7005E-03
			Pu-240	2.2340E-04	2.3212E-04
			Pu-241	1.9280E-05	1.9833E-05
			Pu-242	4.7430E-06	4.7827E-06
			Am-241	7.6680E-07	9.0669E-07
			FP	0.0000E+00	6.7347E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	1.0348E-05
			U-238	4.4499E-03	4.4220E-03
			Pu-239	1.7520E-03	1.6946E-03
			Pu-240	2.2340E-04	2.3301E-04
			Pu-241	1.9280E-05	1.9909E-05
			Pu-242	4.7430E-06	4.7868E-06
			Am-241	7.6680E-07	9.0397E-07
			FP	0.0000E+00	7.5186E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	1.0364E-05
			U-238	4.4499E-03	4.4230E-03
			Pu-239	1.7520E-03	1.6964E-03
			Pu-240	2.2340E-04	2.3268E-04
			Pu-241	1.9280E-05	1.9880E-05
			Pu-242	4.7430E-06	4.7852E-06
			Am-241	7.6680E-07	9.0486E-07
			FP	0.0000E+00	7.2720E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	1.0442E-05
			U-238	4.4499E-03	4.4274E-03
			Pu-239	1.7520E-03	1.7056E-03
			Pu-240	2.2340E-04	2.3120E-04
			Pu-241	1.9280E-05	1.9753E-05
			Pu-242	4.7430E-06	4.7780E-06
			Am-241	7.6680E-07	9.0909E-07
			FP	0.0000E+00	6.0716E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	1.0549E-05
			U-238	4.4499E-03	4.4338E-03
			Pu-239	1.7520E-03	1.7189E-03
			Pu-240	2.2340E-04	2.2970E-04
			Pu-241	1.9280E-05	1.9650E-05
			Pu-242	4.7430E-06	4.7738E-06
			Am-241	7.6680E-07	9.1509E-07
			FP	0.0000E+00	4.2496E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3807E-05
			U-238	7.0573E-03	7.0399E-03
			Pu-239	0.0000E+00	1.6111E-05
			Pu-240	0.0000E+00	5.1836E-08
			FP	0.0000E+00	1.5227E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10A-1.18. Composition of MFA-2 at EOC 10A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3696E-05
			U-238	7.0573E-03	7.0344E-03
			Pu-239	0.0000E+00	2.1249E-05
			Pu-240	0.0000E+00	9.3514E-08
			FP	0.0000E+00	1.9325E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	9.8470E-06
			U-238	4.4270E-03	4.4086E-03
			Pu-239	1.7483E-03	1.7108E-03
			Pu-240	2.2290E-04	2.3041E-04
			Pu-241	1.9040E-05	1.9532E-05
			Pu-242	4.7330E-06	4.7699E-06
			Am-241	7.5700E-07	9.0125E-07
			FP	0.0000E+00	4.7929E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	9.7661E-06
			U-238	4.4270E-03	4.4033E-03
			Pu-239	1.7483E-03	1.6997E-03
			Pu-240	2.2290E-04	2.3132E-04
			Pu-241	1.9040E-05	1.9581E-05
			Pu-242	4.7330E-06	4.7704E-06
			Am-241	7.5700E-07	8.9642E-07
			FP	0.0000E+00	6.3395E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	9.7206E-06
			U-238	4.4270E-03	4.4005E-03
			Pu-239	1.7483E-03	1.6940E-03
			Pu-240	2.2290E-04	2.3220E-04
			Pu-241	1.9040E-05	1.9659E-05
			Pu-242	4.7330E-06	4.7745E-06
			Am-241	7.5700E-07	8.9380E-07
			FP	0.0000E+00	7.0989E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	9.7343E-06
			U-238	4.4270E-03	4.4014E-03
			Pu-239	1.7483E-03	1.6956E-03
			Pu-240	2.2290E-04	2.3190E-04
			Pu-241	1.9040E-05	1.9632E-05
			Pu-242	4.7330E-06	4.7730E-06
			Am-241	7.5700E-07	8.9458E-07
			FP	0.0000E+00	6.8798E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	9.8018E-06
			U-238	4.4270E-03	4.4055E-03
			Pu-239	1.7483E-03	1.7041E-03
			Pu-240	2.2290E-04	2.3053E-04
			Pu-241	1.9040E-05	1.9513E-05
			Pu-242	4.7330E-06	4.7666E-06
			Am-241	7.5700E-07	8.9845E-07
			FP	0.0000E+00	5.7703E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	9.8972E-06
			U-238	4.4270E-03	4.4115E-03
			Pu-239	1.7483E-03	1.7167E-03
			Pu-240	2.2290E-04	2.2909E-04
			Pu-241	1.9040E-05	1.9409E-05
			Pu-242	4.7330E-06	4.7626E-06
			Am-241	7.5700E-07	9.0406E-07
			FP	0.0000E+00	4.0541E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3827E-05
			U-238	7.0573E-03	7.0406E-03
			Pu-239	0.0000E+00	1.5406E-05
			Pu-240	0.0000E+00	4.6476E-08
			FP	0.0000E+00	1.4617E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.2 Cycle 10A-2

Table B10A-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10A-2

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	2.734E-02	3.888E+00	1.919E-02	3.935E+00
1404	8.085E-02	4.652E+00	4.446E-02	4.778E+00
1405	9.264E-03	3.890E+00	6.952E-03	3.906E+00
1505	1.106E-02	3.550E+00	6.539E-03	3.567E+00
1507	9.617E-03	3.291E+00	7.200E-03	3.308E+00
1606	6.006E-03	3.453E+00	4.422E-03	3.464E+00
1607	8.993E-03	2.851E+00	6.503E-03	2.867E+00
2507	2.827E-02	4.180E+00	2.107E-02	4.229E+00
2405	7.001E-02	4.460E+00	4.071E-02	4.571E+00
2506	1.122E-02	3.876E+00	7.938E-03	3.895E+00
2508	1.083E-02	4.596E+00	7.977E-03	4.615E+00
2607	7.671E-03	3.560E+00	5.748E-03	3.574E+00
2608	4.839E-03	3.421E+00	4.041E-03	3.430E+00
2609	9.386E-02	3.167E+00	5.186E-02	3.313E+00

Table B10A-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10A-2

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.855E+15	1.842E+15
MFA-2	2507	3.063E+15	1.971E+15

Table B10A-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7490E-02	1.3904E-02	0.0000E+00
-92.78	5.9094E-02	2.6852E-02	0.0000E+00
-87.78	9.4762E-02	4.2972E-02	0.0000E+00
-82.78	1.3719E-01	6.4106E-02	0.0000E+00
-77.78	1.8909E-01	9.2523E-02	0.0000E+00
-72.15	2.4780E-01	1.2927E-01	0.0000E+00
-65.90	3.0612E-01	1.7541E-01	0.0000E+00
-60.35	3.6758E-01	2.3738E-01	2.5138E-02
-55.49	4.4930E-01	3.2169E-01	3.3599E-02
-50.62	5.4496E-01	4.3254E-01	4.7534E-02
-47.17	6.2244E-01	5.3821E-01	6.4395E-02
-43.58	7.0413E-01	6.5858E-01	7.4425E-01
-38.45	8.2126E-01	8.0299E-01	8.3479E-01
-33.32	9.2956E-01	9.2555E-01	9.3464E-01
-28.20	1.0240E+00	1.0273E+00	1.0197E+00
-23.07	1.1025E+00	1.1098E+00	1.0962E+00
-17.94	1.1636E+00	1.1729E+00	1.1560E+00
-12.82	1.2063E+00	1.2163E+00	1.1944E+00
-7.69	1.2306E+00	1.2409E+00	1.2181E+00
-2.56	1.2360E+00	1.2466E+00	1.2233E+00
2.56	1.2227E+00	1.2335E+00	1.2111E+00
7.69	1.1909E+00	1.2018E+00	1.1796E+00
12.82	1.1415E+00	1.1523E+00	1.1307E+00
17.94	1.0758E+00	1.0864E+00	1.0707E+00
23.07	9.9519E-01	1.0044E+00	9.9089E-01
28.20	9.0174E-01	9.0781E-01	8.9891E-01
33.32	7.9785E-01	7.9824E-01	8.0306E-01
38.45	6.8590E-01	6.7530E-01	6.9632E-01
43.58	5.7029E-01	5.3923E-01	5.9727E-01
47.17	4.9156E-01	4.3247E-01	4.9498E-02
50.62	4.1725E-01	3.3897E-01	3.4897E-02
55.49	3.2587E-01	2.4130E-01	2.2711E-02
60.35	2.4701E-01	1.6701E-01	1.5153E-02
64.98	1.9879E-01	1.2488E-01	0.0000E+00
69.39	1.7069E-01	1.0281E-01	0.0000E+00
76.46	1.3050E-01	7.3220E-02	0.0000E+00
86.80	8.5638E-02	4.4335E-02	0.0000E+00
98.14	4.9635E-02	2.4314E-02	0.0000E+00
110.00	2.1333E-02	1.0931E-02	0.0000E+00

Table B10A-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5287E-02	1.2895E-02	0.0000E+00
-92.78	5.4304E-02	2.4889E-02	0.0000E+00
-87.78	8.7078E-02	3.9832E-02	0.0000E+00
-82.78	1.2618E-01	5.9474E-02	0.0000E+00
-77.78	1.7434E-01	8.6027E-02	0.0000E+00
-72.15	2.2951E-01	1.2067E-01	0.0000E+00
-65.90	2.8617E-01	1.6524E-01	0.0000E+00
-60.35	3.4757E-01	2.2611E-01	2.3606E-02
-55.49	4.2917E-01	3.0902E-01	3.2126E-02
-50.62	5.2569E-01	4.1864E-01	4.6080E-02
-47.17	6.0460E-01	5.2362E-01	6.2868E-02
-43.58	6.8800E-01	6.4360E-01	7.2608E-01
-38.45	8.0749E-01	7.8929E-01	8.2053E-01
-33.32	9.1807E-01	9.1397E-01	9.2286E-01
-28.20	1.0148E+00	1.0182E+00	1.0104E+00
-23.07	1.0957E+00	1.1033E+00	1.0893E+00
-17.94	1.1595E+00	1.1691E+00	1.1518E+00
-12.82	1.2048E+00	1.2151E+00	1.1930E+00
-7.69	1.2311E+00	1.2418E+00	1.2188E+00
-2.56	1.2382E+00	1.2491E+00	1.2257E+00
2.56	1.2263E+00	1.2374E+00	1.2147E+00
7.69	1.1958E+00	1.2070E+00	1.1846E+00
12.82	1.1478E+00	1.1588E+00	1.1373E+00
17.94	1.0836E+00	1.0941E+00	1.0786E+00
23.07	1.0040E+00	1.0128E+00	1.0000E+00
28.20	9.1078E-01	9.1632E-01	9.0834E-01
33.32	8.0627E-01	8.0591E-01	8.1171E-01
38.45	6.9279E-01	6.8129E-01	7.0360E-01
43.58	5.7507E-01	5.4293E-01	6.0278E-01
47.17	4.9475E-01	4.3465E-01	5.0486E-02
50.62	4.1915E-01	3.4011E-01	3.5631E-02
55.49	3.2700E-01	2.4186E-01	2.3215E-02
60.35	2.4813E-01	1.6747E-01	1.5505E-02
64.98	1.9982E-01	1.2503E-01	0.0000E+00
69.39	1.7116E-01	1.0252E-01	0.0000E+00
76.46	1.3009E-01	7.2401E-02	0.0000E+00
86.80	8.4762E-02	4.3366E-02	0.0000E+00
98.14	4.8762E-02	2.3512E-02	0.0000E+00
110.00	2.0658E-02	1.0394E-02	0.0000E+00

Table B10A-2.5. Fission Power Distribution by Pin in MFA-1 at BOC 10A-2

CORE POSITION 1506

[illegible]

Table B10A-2.6. Fission Power Distribution by Pin in MFA-2 at BOC 10A-2

CORE POSITION 2507

[illegible]

Table B10A-2.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10A-2

CORE POSITION 1506

0.881	0.887	0.891	0.896	0.899	0.902	0.904	0.906												
0.895	0.901	0.906	0.911	0.915	0.918	0.921	0.923	0.925											
0.908	0.915	0.921	0.926	0.930	0.934	0.937	0.940	0.942	0.943										
0.921	0.928	0.934	0.940	0.945	0.949	0.952	0.955	0.958	0.959	0.960									
0.932	0.939	0.946	0.952	0.958	0.963	0.967	0.970	0.973	0.975	0.976	0.977								
0.942	0.950	0.958	0.964	0.970	0.976	0.980	0.984	0.987	0.990	0.991	0.993	0.993							
0.951	0.960	0.968	0.975	0.982	0.988	0.993	0.997	1.001	1.003	1.006	1.007	1.008	1.008						
0.960	0.969	0.978	0.985	0.993	0.999	1.004	1.009	1.013	1.016	1.019	1.021	1.022	1.022	1.022					
0.977	0.986	0.995	1.002	1.009	1.015	1.020	1.025	1.028	1.031	1.034	1.035	1.036	1.036						
0.994	1.003	1.011	1.018	1.025	1.031	1.036	1.040	1.043	1.046	1.047	1.049	1.049							
1.010	1.019	1.027	1.034	1.040	1.045	1.050	1.054	1.057	1.059	1.060	1.061								
1.026	1.034	1.042	1.049	1.055	1.060	1.064	1.067	1.070	1.072	1.073									
1.041	1.049	1.056	1.063	1.068	1.073	1.077	1.080	1.082	1.083										
1.055	1.063	1.070	1.076	1.081	1.086	1.089	1.092	1.093											
1.069	1.076	1.083	1.089	1.094	1.098	1.101	1.103												

Table B10A-2.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10A-2

CORE POSITION 2507

	1.089	1.072	1.054	1.035	1.016	0.997	0.977	0.956											
	1.097	1.080	1.063	1.045	1.026	1.007	0.987	0.967	0.946										
	1.103	1.087	1.070	1.053	1.034	1.016	0.996	0.976	0.956	0.935									
	1.109	1.093	1.077	1.060	1.042	1.024	1.005	0.985	0.965	0.944	0.923								
	1.114	1.099	1.082	1.066	1.048	1.030	1.012	0.993	0.973	0.953	0.932	0.911							
	1.118	1.103	1.087	1.071	1.054	1.036	1.018	0.999	0.980	0.960	0.940	0.919	0.897						
	1.122	1.107	1.091	1.075	1.058	1.041	1.023	1.005	0.986	0.966	0.946	0.926	0.905	0.883					
1.124	1.109	1.094	1.078	1.062	1.045	1.028	1.010	0.991	0.972	0.952	0.932	0.911	0.890	0.868					
	1.111	1.096	1.081	1.065	1.048	1.031	1.013	0.995	0.976	0.957	0.937	0.916	0.895	0.874					
	1.098	1.082	1.067	1.050	1.033	1.016	0.998	0.979	0.960	0.940	0.920	0.900	0.879						
	1.083	1.068	1.051	1.035	1.017	1.000	0.981	0.962	0.943	0.923	0.903	0.882							
	1.068	1.052	1.035	1.018	1.000	0.982	0.964	0.945	0.925	0.905	0.885								
	1.051	1.035	1.018	1.000	0.983	0.964	0.946	0.926	0.907	0.886									
	1.034	1.017	1.000	0.982	0.964	0.945	0.926	0.907	0.887										
	1.015	0.998	0.980	0.962	0.944	0.925	0.906	0.886											

Table B10A-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10A-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8656E+15	2.1390E+15
SE	1.6677E+15	2.2249E+15
SW	1.6006E+15	2.0170E+15
W	1.7613E+15	1.7603E+15
NW	1.9781E+15	1.6834E+15
NE	2.0318E+15	1.8419E+15

Table B10A-2.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10A-2

CORE POS.	OUTLET TEMP. (DEG F)		FLOW RATE (LB/H)
	MEASURED	CALCULATED	
1506	1034	1039	114940
1404	917	911	225440
1405	891	887	208130
1505	883	867	208130
1507	873	855	208130
1606	902	898	170680
1607	871	864	170680
2507	1063	1065	114940
2405	949	938	192410
2506	902	894	197920
2508	932	922	208130
2607	926	911	163690
2608	903	900	170680
2609	898	895	173340

Assembly flows are based on a calculated core pressure drop of 110.6 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B10A-2.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10A-2

TEMPERATURE MAP FOR BUNDLE 43	ASSEMBLY NO. 1506	WFA-1
AXIAL HEIGHT	43-515 IN	
500	876 880 884 888 892 896 900 910 912 909 908	859
505	929 935 938 939 938 937 935 934 935	898
510	884 936 1000 1000 1000 936 986	
515	920 925 1015 1022 1023 1024 1023 1017 990 944	908 870
520	1015 1016 1022 1023 1024 1025 1026 1027 1028 1029	872
525	1024 1025 1026 1027 1028 1029 1030 1031 1032 1033	
530	1034 1035 1036 1037 1038 1039 1040 1041 1042 1043	879
535	1044 1045 1046 1047 1048 1049 1050 1051 1052 1053	
540	1054 1055 1056 1057 1058 1059 1060 1061 1062 1063	880
545	1064 1065 1066 1067 1068 1069 1070 1071 1072 1073	
550	1074 1075 1076 1077 1078 1079 1080 1081 1082 1083	881
555	1084 1085 1086 1087 1088 1089 1090 1091 1092 1093	
560	1094 1095 1096 1097 1098 1099 1100 1101 1102 1103	882
565	1104 1105 1106 1107 1108 1109 1110 1111 1112 1113	
570	1114 1115 1116 1117 1118 1119 1120 1121 1122 1123	883
575	1124 1125 1126 1127 1128 1129 1130 1131 1132 1133	
580	1134 1135 1136 1137 1138 1139 1140 1141 1142 1143	884
585	1144 1145 1146 1147 1148 1149 1150 1151 1152 1153	
590	1154 1155 1156 1157 1158 1159 1160 1161 1162 1163	885
595	1164 1165 1166 1167 1168 1169 1170 1171 1172 1173	
600	1174 1175 1176 1177 1178 1179 1180 1181 1182 1183	886
605	1184 1185 1186 1187 1188 1189 1190 1191 1192 1193	
610	1194 1195 1196 1197 1198 1199 1200 1201 1202 1203	887
615	1204 1205 1206 1207 1208 1209 1210 1211 1212 1213	
620	1214 1215 1216 1217 1218 1219 1220 1221 1222 1223	888
625	1224 1225 1226 1227 1228 1229 1230 1231 1232 1233	
630	1234 1235 1236 1237 1238 1239 1240 1241 1242 1243	889
635	1244 1245 1246 1247 1248 1249 1250 1251 1252 1253	
640	1254 1255 1256 1257 1258 1259 1260 1261 1262 1263	890
645	1264 1265 1266 1267 1268 1269 1270 1271 1272 1273	
650	1274 1275 1276 1277 1278 1279 1280 1281 1282 1283	891
655	1284 1285 1286 1287 1288 1289 1290 1291 1292 1293	
660	1294 1295 1296 1297 1298 1299 1300 1301 1302 1303	892
665	1304 1305 1306 1307 1308 1309 1310 1311 1312 1313	
670	1314 1315 1316 1317 1318 1319 1320 1321 1322 1323	893
675	1324 1325 1326 1327 1328 1329 1330 1331 1332 1333	
680	1334 1335 1336 1337 1338 1339 1340 1341 1342 1343	894
685	1344 1345 1346 1347 1348 1349 1350 1351 1352 1353	
690	1354 1355 1356 1357 1358 1359 1360 1361 1362 1363	895
695	1364 1365 1366 1367 1368 1369 1370 1371 1372 1373	
 	

Table B10A-2.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10A-2

TEMPERATURE MAP FOR BUNDLE 52	ASSEMBLY NO. 2507	WFI-2
AXIAL HEIGHT	43.709 IN	806
920	912 312 311 308 305 301 307	890
940	947 947 945 941 936 932 927	922
* 975	991 981 978 973 967 961 956 953 *	
922 951	1045 1057 1054 1049 1043 1035 1017	
926 956	979 1004 1002 1004 1079 1073 1067 1004 1017 989 * 936 913	
	1006 1117 1115 1113 1102 1100 1007 1051	
	985 1065 1120 1130 1126 1120 1113 1104 1028 960 * 938 916	
	1037 1136 1141 1136 1130 1123 1114 1058 1033	
929 961	992 1072 1131 1145 1142 1135 1128 1121 1111 1067 1026 967 * 937 916	
	1102 1143 1149 1146 1136 1129 1122 1113 1006 1049	
931 964	997 1076 1135 1150 1147 1140 1133 1125 1118 1107 1082 1022 953 * 934 914	
	1106 1146 1152 1147 1140 1132 1124 1117 1108 1090 1044	
932 967	1001 1079 1159 1153 1150 1143 1135 1128 1120 1113 1102 1077 1016 949 * 930 911	
	1107 1149 1155 1150 1142 1134 1126 1119 1112 1103 1004 1038	
933 969	1003 1079 1141 1156 1151 1146 1137 1129 1122 1113 1107 1096 1071 1010 944 * 927 908	
	1101 1149 1152 1145 1140 1132 1124 1116 1109 1102 1099 1060 995 941 * 923 905	
931 967	1001 1064 1135 1156 1151 1146 1137 1129 1122 1113 1106 1087 1071 1028	
934 964	992	
931 965	932 1062 1133 1152 1150 1142 1134 1126 1119 1111 1104 1095 1076 1029 941 * 914 887	
	1099 1146 1155 1150 1142 1134 1126 1119 1111 1104 1095 1076 1029 941 * 914 887	
	1103 1143 1149 1144 1136 1128 1121 1114 1106 1098 1080 1037	
924 961	966 1076 1136 1140 1144 1133 1125 1118 1110 1103 1022 1004 1012 952 * 956 930	
	1103 1143 1149 1144 1136 1128 1121 1114 1106 1098 1080 1037	
931 962	934 1074 1131 1145 1142 1136 1127 1120 1113 1105 1095 1071 1016 954 * 929 902	
	1099 1137 1143 1138 1131 1123 1116 1109 1100 1093 1040	
922 961	963 1071 1129 1138 1134 1123 1122 1115 1108 1087 1074 1018 955 * 930 904	
	1094 1131 1136 1131 1125 1118 1111 1107 1085 1042	
919 960	937 1066 1116 1122 1122 1115 1108 1098 1076 1010 955 * 931 906	
	1088 1122 1126 1122 1115 1109 1101 1085 1043	
916 966	924 1076 1105 1114 1111 1105 1099 1091 1072 1018 954 * 931 907	
	1075 1101 1103 1098 1093 1086 1074 1039	
911 962	967 1073 1067 1072 1066 1062 1056 1045 1007 933 * 910 907	
	1036 1044 1043 1040 1035 1029 1011	
	977 975 975 973 971 971 968 962 954 *	
917	940 940 939 937 935 932 926	921
906	905 904 903 900 897 894 890	889

2

Table B10A-2.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10A-2

TEMPERATURE MAP FOR BUNDLE 43		ASSEMBLY NO. 1506										MFA-1	
AXIAL HEIGHT		59.182 IN.										FEET	
912	917	921	922	922	921	920	911						870
906	949	951	952	951	950	949	948	950					
901	923	942	978	1008	1016	1018	1016	1010	986	958			880
905	925	946	992	1039	1056	1060	1061	1058	1044	1004	964		885
906	922	945	958	1045	1070	1077	1079	1080	1076	1058	1011	967	889
907	930	953	1001	1053	1076	1083	1086	1087	1088	1089	1084	1064	893
907	932	952	1003	1056	1079	1087	1088	1089	1090	1091	1092	1087	894
906	932	957	1002	1056	1081	1089	1092	1094	1096	1098	1100	1096	895
903	929	945	989	1053	1072	1085	1097	1101	1104	1106	1108	1098	896
902	916	945	982	1051	1063	1066	1072	1104	1107	1108	1102	1101	897
905	915	945	1018	1070	1090	1097	1100	1102	1105	1107	1109	1110	898
901	922	953	1003	1056	1082	1103	1105	1107	1110	1112	1113	1107	899
904	926	947	1010	1063	1085	1104	1106	1113	1115	1116	1115	1100	900
906	929	942	1035	1081	1101	1107	1110	1113	1115	1116	1115	1100	901
900	912	945	1040	1097	1105	1111	1114	1116	1118	1116	1102	1058	902
908	914	948	1072	1102	1109	1112	1113	1112	1112	1112	1100	1057	903
907	913	947	1037	1060	1081	1100	1103	1105	1108	1106	1084	1028	904
909	916	949	1007	1024	1030	1034	1036	1034	1030	1024	1020		905
907	917	943	945	946	950	951	949						906
912	928	941	914	915	917	917	916						907

Table B10A-2.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10A-2

TEMPERATURE MAP FOR BUNDLE 52 AXIAL HEIGHT 50.182 IN	ASSEMBLY NO. 2507	MFA-2
917	921 923 922 918 916 913 909	981
953	959 959 956 962 948 943 939	934
955	988 993 994 990 985 979 973 968 966	
957	1037 1050 1048 1043 1037 1028 1016	
958	991 1037 1070 1075 1071 1068 1058 1048 1010 972	947 923
959	1074 1126 1112 1107 1101 1093 1075 1041	
960	987 1057 1110 1124 1122 1116 1109 1099 1076 1023 973	949 926
961	1067 1130 1139 1136 1132 1122 1112 1093 1066	
962	1004 1065 1124 1142 1142 1136 1129 1121 1110 1081 1022 970	948 927
963	1031 1138 1149 1145 1139 1131 1124 1113 1092 1042	
964	1069 1129 1149 1149 1143 1135 1128 1120 1107 1077 1017 966	946 926
965	1064 1142 1151 1149 1142 1135 1127 1119 1103 1087 1037	
966	1014 1073 1132 1152 1162 1166 1159 1130 1123 1115 1101 1072 1012 942	943 924
967	1032 1144 1156 1152 1143 1137 1129 1122 1114 1103 1061 1031	
968	1017 1072 1133 1156 1156 1148 1141 1133 1123 1118 1109 1096 1066 1005 958	940 921
969	1060 1142 1157 1155 1148 1139 1131 1124 1116 1103 1097 1073 1028	
970	1125 1154 1157 1151 1143 1135 1127 1119 1112 1103 1088 1053 991 955	917 918
971	1124 1153 1156 1152 1145 1137 1129 1122 1114 1107 1095 1072 1022	956 959 900
972	1087 1140 1155 1152 1145 1137 1129 1122 1114 1107 1095 1072 1022	953 952 948 947
973	1081 1140 1155 1152 1145 1137 1129 1122 1114 1107 1095 1072 1022	
974	1011 1047 1129 1150 1148 1144 1136 1128 1121 1113 1105 1092 1064 1008 967	939 911
975	1139 1159 1146 1139 1131 1124 1117 1109 1099 1077 1031	
976	1013 1043 1126 1144 1144 1136 1128 1121 1113 1105 1092 1067 1013 960	942 914
977	1134 1143 1140 1133 1126 1119 1111 1101 1080 1035	
978	1014 1066 1120 1138 1137 1131 1123 1117 1110 1097 1070 1015 965	941 916
979	1087 1137 1136 1133 1127 1120 1113 1107 1082 1036	
980	1102 1142 1120 1128 1122 1116 1102 1097 1070 1016 969	941 917
981	1117 1125 1121 1115 1109 1100 1081 1037	
982	1013 1154 1137 1103 1102 1096 1087 1065 1014 968	941 918
983	1066 1093 1097 1093 1086 1061 1067 1031	
984	1053 1059 1039 1036 1032 1025 1007	
985	1053 1059 1039 1036 1032 1025 1007	
986	991 990 989 988 987 986 985 984 983 977 963	
987	954 954 953 951 948 945 940	935
988	917 916 915 912 906 902	900

Table B10A-2.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 10A-2

TEMPERATURE MAP FOR BUNDLE 43		ASSEMBLY NO. 1506		MFA-1																
AXIAL HEIGHT 92.000 IN																				
	506	509	511	513	515	516	517	518	524											
	538	941	944	946	947	947	948	948	937											
		969	973	976	977	977	977	977	978	979										
		983	991	996	997	996	994	990												
928	949	969	981	995	1003	1007	1007	1005	1000	993	984	943	902							
		954	1012	1023	1027	1028	1028	1018	1005											
929	950	970	989	1012	1027	1035	1037	1037	1031	1020	1003	989	948	905						
		1002	1027	1047	1052	1055	1054	1048	1036	1016										
929	951	977	994	1022	1044	1055	1061	1062	1059	1050	1033	1009	991	950	909					
		1007	1036	1056	1067	1072	1074	1071	1063	1047	1021									
928	952	975	997	1028	1053	1068	1075	1078	1078	1074	1062	1041	1013	992	952	911				
		1009	1040	1063	1076	1082	1085	1086	1082	1072	1053	1024								
928	952	976	993	1031	1057	1074	1083	1087	1089	1088	1082	1069	1045	1014	993	953	913			
		1003	1040	1066	1080	1086	1082	1093	1093	1089	1077	1055	1024							
926	952	977	996	1029	1058	1077	1087	1092	1095	1096	1094	1087	1071	1045	1012	992	954	915		
		1001	1035	1063	1081	1091	1096	1096	1093	1090	1082	1077	1052	1028						
924	950	976	988	1020	1052	1075	1088	1095	1095	1100	1101	1098	1088	1065	1038	1007	992	955	916	
906	919	972													994	948	902			
918	944	972	987	1020	1053	1077	1091	1095	1101	1107	1104	1101	1091	1071	1048	1010	939	960	921	
		1001	1037	1067	1086	1096	1101	1104	1105	1104	1098	1082	1056	1024						
915	945	974	955	1033	1065	1088	1097	1103	1106	1107	1105	1095	1081	1053	1020	1002	963	923		
		1018	1047	1075	1092	1101	1105	1107	1107	1102	1090	1066	1033							
917	947	976	1001	1040	1071	1090	1100	1105	1107	1107	1101	1085	1059	1025	1002	964	925			
		1016	1053	1080	1095	1103	1106	1107	1103	1092	1070	1037								
918	949	979	1006	1064	1073	1090	1099	1103	1104	1099	1085	1060	1026	1001	964	926				
		1020	1055	1079	1093	1099	1101	1099	1089	1069	1038									
918	951	982	1008	1043	1069	1087	1098	1092	1090	1079	1067	1024	959	967	926					
		1020	1051	1070	1081	1085	1085	1079	1062	1035										
918	951	984	1006	1035	1054	1064	1069	1069	1063	1047	1020	997	962	926						
		1014	1036	1050	1057	1059	1057	1047	1027											
917	950	983	959	1016	1024	1032	1035	1035	1028	1012	995	961	926							
		999	1010	1017	1021	1023	1021	1013												
		980	981	985	989	994	997	999	999	995										
947	957	960	963	966	964	969	969	959												
915	932	933	935	937	938	939	938	923												

Table B10A-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 10A-2

TEMPERATURE MAP FOR FUELLE E2 AXIAL HEIGHT 92-000 IN	ASSEMBLY NO. 2207	MFA-2
922	945 946 947 948 949 950 951 952 953 954 955	925
974	977 978 979 980 981 982 983 984 985 986 987	958
985	988 989 990 991 992 993 994 995 996 997 998	972
960 924	1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018	939
962 963	1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029	943
964 982	1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040	945
966 998	1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051	947
968 1000	1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062	948
969 1000	1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073	949
970 1000	1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084	950
971 1000	1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095	951
972 1000	1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106	952
973 1000	1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117	953
974 1000	1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128	954
975 1000	1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139	955
976 1000	1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150	956
977 1000	1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161	957
978 1000	1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172	958
979 1000	1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183	959
980 1000	1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194	960
981 1000	1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205	961
982 1000	1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216	962
983 1000	1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227	963
984 1000	1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238	964
985 1000	1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249	965
986 1000	1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260	966
987 1000	1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271	967
988 1000	1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282	968
989 1000	1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293	969
990 1000	1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304	970
991 1000	1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315	971
992 1000	1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326	972
993 1000	1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337	973
 		

Table E10A-2.17. Composition of MFA-1 at EOC 10A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3496E-05
			U-238	7.0573E-03	7.0246E-03
			Pu-239	0.0000E+00	3.0158E-05
			Pu-240	0.0000E+00	1.9609E-07
			FP	0.0000E+00	2.7995E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	1.0386E-05
			U-238	4.4499E-03	4.4246E-03
			Pu-239	1.7520E-03	1.7006E-03
			Pu-240	2.2340E-04	2.3350E-04
			Pu-241	1.9280E-05	1.9937E-05
			Pu-242	4.7430E-06	4.7949E-06
			Am-241	7.6680E-07	9.7032E-07
			FP	0.0000E+00	6.5884E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	1.0273E-05
			U-238	4.4499E-03	4.4177E-03
			Pu-239	1.7520E-03	1.6860E-03
			Pu-240	2.2340E-04	2.3458E-04
			Pu-241	1.9280E-05	1.9985E-05
			Pu-242	4.7430E-06	4.7950E-06
			Am-241	7.6680E-07	9.6380E-07
			FP	0.0000E+00	8.6461E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	1.0210E-05
			U-238	4.4499E-03	4.4140E-03
			Pu-239	1.7520E-03	1.6785E-03
			Pu-240	2.2340E-04	2.3571E-04
			Pu-241	1.9280E-05	2.0084E-05
			Pu-242	4.7430E-06	4.8005E-06
			Am-241	7.6680E-07	9.6042E-07
			FP	0.0000E+00	9.6417E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	1.0230E-05
			U-238	4.4499E-03	4.4152E-03
			Pu-239	1.7520E-03	1.6808E-03
			Pu-240	2.2340E-04	2.3529E-04
			Pu-241	1.9280E-05	2.0046E-05
			Pu-242	4.7430E-06	4.7983E-06
			Am-241	7.6680E-07	9.6151E-07
			FP	0.0000E+00	9.3286E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	1.0329E-05
			U-238	4.4499E-03	4.4209E-03
			Pu-239	1.7520E-03	1.6925E-03
			Pu-240	2.2340E-04	2.3341E-04
			Pu-241	1.9280E-05	1.9881E-05
			Pu-242	4.7430E-06	4.7888E-06
			Am-241	7.6680E-07	9.6677E-07
			FP	0.0000E+00	7.8016E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	1.0465E-05
			U-238	4.4499E-03	4.4291E-03
			Pu-239	1.7520E-03	1.7094E-03
			Pu-240	2.2340E-04	2.3152E-04
			Pu-241	1.9280E-05	1.9747E-05
			Pu-242	4.7430E-06	4.7832E-06
			Am-241	7.6680E-07	9.7442E-07
			FP	0.0000E+00	5.4760E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3709E-05
			U-238	7.0573E-03	7.0347E-03
			Pu-239	0.0000E+00	2.0819E-05
			Pu-240	0.0000E+00	8.6890E-08
			FP	0.0000E+00	2.0138E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10A-2.18. Composition of MFA-2 at EOC 10A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3549E-05
			U-238	7.0573E-03	7.0268E-03
			Pu-239	0.0000E+00	2.8137E-05
			Pu-240	0.0000E+00	1.6635E-07
			FP	0.0000E+00	2.6628E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	9.7467E-06
			U-238	4.4270E-03	4.4026E-03
			Pu-239	1.7483E-03	1.6987E-03
			Pu-240	2.2290E-04	2.3279E-04
			Pu-241	1.9040E-05	1.9688E-05
			Pu-242	4.7330E-06	4.7824E-06
			Am-241	7.5700E-07	9.5864E-07
			FP	0.0000E+00	6.3447E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	9.6407E-06
			U-238	4.4270E-03	4.3956E-03
			Pu-239	1.7483E-03	1.6842E-03
			Pu-240	2.2290E-04	2.3396E-04
			Pu-241	1.9040E-05	1.9753E-05
			Pu-242	4.7330E-06	4.7831E-06
			Am-241	7.5700E-07	9.5219E-07
			FP	0.0000E+00	8.3808E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	9.5810E-06
			U-238	4.4270E-03	4.3919E-03
			Pu-239	1.7483E-03	1.6767E-03
			Pu-240	2.2290E-04	2.3511E-04
			Pu-241	1.9040E-05	1.9858E-05
			Pu-242	4.7330E-06	4.7887E-06
			Am-241	7.5700E-07	9.4879E-07
			FP	0.0000E+00	9.3816E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	9.5986E-06
			U-238	4.4270E-03	4.3930E-03
			Pu-239	1.7483E-03	1.6788E-03
			Pu-240	2.2290E-04	2.3473E-04
			Pu-241	1.9040E-05	1.9822E-05
			Pu-242	4.7330E-06	4.7867E-06
			Am-241	7.5700E-07	9.4976E-07
			FP	0.0000E+00	9.0994E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	9.6866E-06
			U-238	4.4270E-03	4.3984E-03
			Pu-239	1.7483E-03	1.6898E-03
			Pu-240	2.2290E-04	2.3295E-04
			Pu-241	1.9040E-05	1.9663E-05
			Pu-242	4.7330E-06	4.7780E-06
			Am-241	7.5700E-07	9.5474E-07
			FP	0.0000E+00	7.6462E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	9.8117E-06
			U-238	4.4270E-03	4.4064E-03
			Pu-239	1.7483E-03	1.7064E-03
			Pu-240	2.2290E-04	2.3109E-04
			Pu-241	1.9040E-05	1.9525E-05
			Pu-242	4.7330E-06	4.7726E-06
			Am-241	7.5700E-07	9.6214E-07
			FP	0.0000E+00	5.3857E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3721E-05
			U-238	7.0573E-03	7.0350E-03
			Pu-239	0.0000E+00	2.0506E-05
			Pu-240	0.0000E+00	8.3485E-08
			FP	0.0000E+00	2.0017E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
			Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02
			SS-316	2.5562E-02	2.5562E-02

4.3 Cycle 10A-3

Table B10A-3.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10A-3

CORE POS.	* * * * *	POWER IN MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE
1506	2.923E-02	3.888E+00	2.016E-02
1404	8.347E-02	4.655E+00	4.578E-02
1405	9.573E-03	3.886E+00	7.157E-03
1505	1.134E-02	3.560E+00	6.692E-03
1507	9.828E-03	3.290E+00	7.354E-03
1606	6.233E-03	3.462E+00	4.559E-03
1607	9.179E-03	2.857E+00	6.639E-03
2507	3.000E-02	4.145E+00	2.203E-02
2405	7.196E-02	4.423E+00	4.182E-02
2506	1.144E-02	3.850E+00	8.082E-03
2508	1.108E-02	4.557E+00	8.140E-03
2607	7.842E-03	3.538E+00	5.861E-03
2608	4.991E-03	3.398E+00	4.147E-03
2609	9.444E-02	3.150E+00	5.240E-02
			3.297E+00

Table B10A-3.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10A-3

Assembly	Core Pos.	Flux (n/cm ² -sec)
		Total
MFA-1	1506	2.874E+15
MFA-2	2507	3.059E+15
		> 0.1 MeV
		1.853E+15
		1.967E+15

Table B10A-3.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7544E-02	1.3954E-02	0.0000E+00
-92.78	5.9206E-02	2.6947E-02	0.0000E+00
-87.78	9.4932E-02	4.3121E-02	0.0000E+00
-82.78	1.3742E-01	6.4325E-02	0.0000E+00
-77.78	1.8939E-01	9.2832E-02	0.0000E+00
-72.15	2.4815E-01	1.2970E-01	0.0000E+00
-65.90	3.0652E-01	1.7598E-01	0.0000E+00
-60.35	3.6801E-01	2.3819E-01	2.7593E-02
-55.49	4.4981E-01	3.2261E-01	3.6261E-02
-50.62	5.4546E-01	4.3347E-01	5.0392E-02
-47.17	6.2291E-01	5.3906E-01	6.7363E-02
-43.58	7.0456E-01	6.5929E-01	7.4547E-01
-38.45	8.2159E-01	8.0352E-01	8.3617E-01
-33.32	9.2971E-01	9.2582E-01	9.3597E-01
-28.20	1.0239E+00	1.0272E+00	1.0192E+00
-23.07	1.1022E+00	1.1093E+00	1.0954E+00
-17.94	1.1631E+00	1.1722E+00	1.1551E+00
-12.82	1.2057E+00	1.2154E+00	1.1923E+00
-7.69	1.2298E+00	1.2399E+00	1.2159E+00
-2.56	1.2353E+00	1.2456E+00	1.2211E+00
2.56	1.2221E+00	1.2327E+00	1.2094E+00
7.69	1.1905E+00	1.2012E+00	1.1780E+00
12.82	1.1413E+00	1.1520E+00	1.1294E+00
17.94	1.0759E+00	1.0865E+00	1.0712E+00
23.07	9.9554E-01	1.0048E+00	9.9164E-01
28.20	9.0235E-01	9.0856E-01	8.9985E-01
33.32	7.9865E-01	7.9927E-01	8.0564E-01
38.45	6.8679E-01	6.7644E-01	6.9875E-01
43.58	5.7114E-01	5.4028E-01	5.9942E-01
47.17	4.9233E-01	4.3346E-01	5.1245E-02
50.62	4.1793E-01	3.3987E-01	3.6473E-02
55.49	3.2644E-01	2.4205E-01	2.4051E-02
60.35	2.4746E-01	1.6758E-01	1.6265E-02
64.98	1.9916E-01	1.2529E-01	0.0000E+00
69.39	1.7102E-01	1.0314E-01	0.0000E+00
76.46	1.3076E-01	7.3464E-02	0.0000E+00
86.80	8.5815E-02	4.4486E-02	0.0000E+00
98.14	4.9740E-02	2.4398E-02	0.0000E+00
110.00	2.1379E-02	1.0970E-02	0.0000E+00

Table B10A-3.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5372E-02	1.2956E-02	0.0000E+00
-92.78	5.4484E-02	2.5004E-02	0.0000E+00
-87.78	8.7356E-02	4.0013E-02	0.0000E+00
-82.78	1.2656E-01	5.9739E-02	0.0000E+00
-77.78	1.7484E-01	8.6392E-02	0.0000E+00
-72.15	2.3013E-01	1.2117E-01	0.0000E+00
-65.90	2.8687E-01	1.6591E-01	0.0000E+00
-60.35	3.4830E-01	2.2703E-01	2.5974E-02
-55.49	4.2994E-01	3.1008E-01	3.4715E-02
-50.62	5.2644E-01	4.1975E-01	4.8897E-02
-47.17	6.0532E-01	5.2466E-01	6.5829E-02
-43.58	6.8870E-01	6.4452E-01	7.2770E-01
-38.45	8.0800E-01	7.9004E-01	8.2223E-01
-33.32	9.1834E-01	9.1440E-01	9.2450E-01
-28.20	1.0147E+00	1.0181E+00	1.0100E+00
-23.07	1.0954E+00	1.1029E+00	1.0885E+00
-17.94	1.1588E+00	1.1683E+00	1.1507E+00
-12.82	1.2039E+00	1.2139E+00	1.1905E+00
-7.69	1.2301E+00	1.2405E+00	1.2163E+00
-2.56	1.2372E+00	1.2478E+00	1.2232E+00
2.56	1.2254E+00	1.2363E+00	1.2126E+00
7.69	1.1951E+00	1.2061E+00	1.1827E+00
12.82	1.1475E+00	1.1584E+00	1.1357E+00
17.94	1.0836E+00	1.0941E+00	1.0789E+00
23.07	1.0043E+00	1.0133E+00	1.0007E+00
28.20	9.1152E-01	9.1720E-01	9.0934E-01
33.32	8.0726E-01	8.0719E-01	8.1464E-01
38.45	6.9394E-01	6.8268E-01	7.0643E-01
43.58	5.7621E-01	5.4432E-01	6.0535E-01
47.17	4.9585E-01	4.3595E-01	5.2402E-02
50.62	4.2020E-01	3.4131E-01	3.7358E-02
55.49	3.2791E-01	2.4286E-01	2.4688E-02
60.35	2.4890E-01	1.6825E-01	1.6738E-02
64.98	2.0052E-01	1.2563E-01	0.0000E+00
69.39	1.7179E-01	1.0303E-01	0.0000E+00
76.46	1.3062E-01	7.2781E-02	0.0000E+00
86.80	8.5140E-02	4.3610E-02	0.0000E+00
98.14	4.8997E-02	2.3654E-02	0.0000E+00
110.00	2.0763E-02	1.0461E-02	0.0000E+00

Table B10A-3.5. Fission Power Distribution by Pin in MFA-1 at BOC 10A-3

CORE POSITION 1506

	0.900	0.905	0.909	0.913	0.916	0.919	0.922	0.924	
	0.912	0.917	0.921	0.926	0.929	0.933	0.936	0.938	0.940
	0.922	0.928	0.933	0.938	0.942	0.946	0.949	0.952	0.954
	0.956								
	0.933	0.938	0.944	0.949	0.953	0.958	0.961	0.964	0.967
	0.970	0.972							
	0.942	0.948	0.954	0.959	0.964	0.969	0.973	0.977	0.980
	0.982	0.985	0.987						
	0.951	0.957	0.964	0.969	0.974	0.979	0.984	0.988	0.991
	0.994	0.997	1.000	1.002					
	0.959	0.966	0.972	0.978	0.984	0.989	0.994	0.998	1.002
	1.005	1.009	1.011	1.014	1.016				
0.966	0.973	0.980	0.986	0.992	0.998	1.003	1.007	1.012	1.015
	1.019	1.022	1.025	1.028	1.030				
	0.980	0.987	0.994	1.000	1.005	1.011	1.016	1.020	1.025
	1.028	1.032	1.035	1.038	1.041				
	0.994	1.000	1.007	1.012	1.018	1.023	1.028	1.033	1.037
	1.041	1.045	1.048	1.051					
	1.006	1.013	1.019	1.024	1.030	1.035	1.040	1.044	1.049
	1.053	1.057	1.060						
	1.018	1.024	1.030	1.035	1.041	1.046	1.051	1.055	1.060
	1.064	1.068							
	1.029	1.035	1.040	1.046	1.051	1.056	1.061	1.066	1.071
	1.075								
	1.039	1.045	1.050	1.056	1.061	1.066	1.071	1.076	1.081
	1.049	1.054	1.060	1.065	1.070	1.076	1.081	1.086	

Table B10A-3.6. Fission Power Distribution by Pin in MFA-2 at BOC 10A-3

CORE POSITION 2507

[illegible]

Table B10A-3.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10A-3

CORE POSITION 1506

0.881	0.887	0.891	0.895	0.899	0.902	0.904	0.905										
0.895	0.901	0.906	0.911	0.915	0.918	0.921	0.923	0.924									
0.909	0.915	0.921	0.926	0.930	0.934	0.937	0.939	0.941	0.942								
0.921	0.928	0.934	0.940	0.945	0.949	0.952	0.955	0.957	0.959	0.960							
0.932	0.940	0.947	0.953	0.958	0.963	0.967	0.970	0.972	0.974	0.976	0.977						
0.943	0.951	0.958	0.965	0.971	0.976	0.980	0.984	0.987	0.989	0.991	0.992	0.992					
0.952	0.961	0.969	0.976	0.982	0.988	0.993	0.997	1.000	1.003	1.005	1.006	1.007	1.007				
0.961	0.970	0.978	0.986	0.993	0.999	1.004	1.009	1.013	1.016	1.018	1.020	1.021	1.022	1.022			
0.978	0.987	0.995	1.003	1.009	1.015	1.020	1.025	1.028	1.031	1.033	1.035	1.035	1.035				
0.995	1.003	1.011	1.019	1.025	1.031	1.036	1.040	1.043	1.045	1.047	1.048	1.048					
1.011	1.019	1.027	1.034	1.040	1.046	1.050	1.054	1.057	1.059	1.060	1.061						
1.026	1.035	1.042	1.049	1.055	1.060	1.064	1.067	1.070	1.071	1.072							
1.041	1.050	1.057	1.063	1.069	1.073	1.077	1.080	1.082	1.083								
1.056	1.064	1.071	1.077	1.082	1.086	1.089	1.092	1.093									
1.070	1.077	1.084	1.089	1.094	1.098	1.101	1.103										

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Table B10A-3.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10A-3

CORE POSITION 2507

	1.089	1.072	1.054	1.036	1.017	0.997	0.977	0.956													
		1.097	1.080	1.063	1.045	1.026	1.007	0.987	0.967	0.946											
			1.103	1.087	1.070	1.053	1.035	1.016	0.996	0.976	0.956	0.935									
				1.109	1.093	1.077	1.060	1.042	1.024	1.005	0.985	0.965	0.945	0.923							
					1.114	1.099	1.083	1.066	1.048	1.030	1.012	0.993	0.973	0.953	0.932	0.911					
						1.118	1.103	1.087	1.071	1.054	1.036	1.018	0.999	0.980	0.960	0.940	0.919	0.897			
							1.122	1.107	1.091	1.075	1.058	1.041	1.023	1.005	0.986	0.966	0.946	0.926	0.905	0.883	
1.	1.124	1.109	1.094	1.078	1.062	1.045	1.028	1.009	0.991	0.972	0.952	0.932	0.911	0.890	0.868						
								1.111	1.096	1.081	1.065	1.048	1.031	1.013	0.995	0.976	0.956	0.937	0.916	0.895	0.874
									1.098	1.082	1.066	1.050	1.033	1.016	0.998	0.979	0.960	0.940	0.920	0.900	0.878
										1.083	1.067	1.051	1.034	1.017	0.999	0.981	0.962	0.943	0.923	0.903	0.882
											1.068	1.052	1.035	1.018	1.000	0.982	0.964	0.945	0.925	0.905	0.885
												1.051	1.035	1.018	1.000	0.983	0.964	0.945	0.926	0.907	0.886
													1.034	1.017	1.000	0.982	0.964	0.945	0.926	0.907	0.887
														1.015	0.998	0.980	0.962	0.944	0.925	0.906	0.886

Table B10A-3.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10A-3

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8787E+15	2.1340E+15
SE	1.6787E+15	2.2202E+15
SW	1.6099E+15	2.0130E+15
W	1.7705E+15	1.7564E+15
NW	1.9888E+15	1.6795E+15
NE	2.0449E+15	1.8375E+15

Table B10A-3.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10A-3

CORE POS.	MEASURED	FLOW RATE (LB/H)
	OUTLET TEMP. (DEG F)	
1506	1033	114940
1404	916	225440
1405	890	208130
1505	884	208130
1507	873	208130
1606	902	170680
1607	871	170680
2507	1058	114940
2405	945	192410
2506	900	197920
2508	927	208130
2607	922	163690
2608	899	170680
2609	897	173340

Assembly flows are based on a calculated core pressure drop of 110.6 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E10A-3.17. Composition of MFA-1 at EOC 10A-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3455E-05
			U-238	7.0573E-03	7.0225E-03
			Pu-239	0.0000E+00	3.2081E-05
			Pu-240	0.0000E+00	2.2219E-07
			FP	0.0000E+00	3.0103E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	1.0357E-05
			U-238	4.4499E-03	4.4230E-03
			Pu-239	1.7520E-03	1.6973E-03
			Pu-240	2.2340E-04	2.3414E-04
			Pu-241	1.9280E-05	1.9977E-05
			Pu-242	4.7430E-06	4.7984E-06
			Am-241	7.6680E-07	9.8823E-07
			FP	0.0000E+00	7.0090E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	1.0237E-05
			U-238	4.4499E-03	4.4156E-03
			Pu-239	1.7520E-03	1.6819E-03
			Pu-240	2.2340E-04	2.3528E-04
			Pu-241	1.9280E-05	2.0028E-05
			Pu-242	4.7430E-06	4.7986E-06
			Am-241	7.6680E-07	9.8128E-07
			FP	0.0000E+00	9.1922E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	1.0171E-05
			U-238	4.4499E-03	4.4117E-03
			Pu-239	1.7520E-03	1.6739E-03
			Pu-240	2.2340E-04	2.3648E-04
			Pu-241	1.9280E-05	2.0134E-05
			Pu-242	4.7430E-06	4.8045E-06
			Am-241	7.6680E-07	9.7771E-07
			FP	0.0000E+00	1.0248E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	1.0192E-05
			U-238	4.4499E-03	4.4130E-03
			Pu-239	1.7520E-03	1.6764E-03
			Pu-240	2.2340E-04	2.3603E-04
			Pu-241	1.9280E-05	2.0094E-05
			Pu-242	4.7430E-06	4.8021E-06
			Am-241	7.6680E-07	9.7885E-07
			FP	0.0000E+00	9.9159E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	1.0297E-05
			U-238	4.4499E-03	4.4190E-03
			Pu-239	1.7520E-03	1.6888E-03
			Pu-240	2.2340E-04	2.3404E-04
			Pu-241	1.9280E-05	1.9917E-05
			Pu-242	4.7430E-06	4.7919E-06
			Am-241	7.6680E-07	9.8439E-07
			FP	0.0000E+00	8.2964E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	1.0441E-05
			U-238	4.4499E-03	4.4277E-03
			Pu-239	1.7520E-03	1.7067E-03
			Pu-240	2.2340E-04	2.3204E-04
			Pu-241	1.9280E-05	1.9774E-05
			Pu-242	4.7430E-06	4.7859E-06
			Am-241	7.6680E-07	9.9251E-07
			FP	0.0000E+00	5.8275E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3681E-05
			U-238	7.0573E-03	7.0332E-03
			Pu-239	0.0000E+00	2.2166E-05
			Pu-240	0.0000E+00	9.8597E-08
			FP	0.0000E+00	2.1588E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10A-3.18. Composition of MFA-2 at EOC 10A-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23 SS-316	5.3150E-03 6.4090E-02	5.3150E-03 6.4090E-02
2	-75.28	-62.78	Na-23 SS-316	1.3177E-02 3.4175E-02	1.3177E-02 3.4175E-02
3	-62.78	-46.14	U-235 U-238 Pu-239 Pu-240 FP O-16 Na-23 SS-316	1.4143E-05 7.0573E-03 0.0000E+00 0.0000E+00 0.0000E+00 1.4143E-02 9.7416E-03 1.9073E-02	1.3508E-05 7.0246E-03 3.0088E-05 1.9078E-07 2.8791E-06 1.4143E-02 9.7416E-03 1.9073E-02
4	-46.14	-30.76	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0160E-05 4.4270E-03 1.7483E-03 2.2290E-04 1.9040E-05 4.7330E-06 7.5700E-07 0.0000E+00 1.2760E-02 9.8100E-03 1.8990E-02	9.7183E-06 4.4009E-03 1.6953E-03 2.3346E-04 1.9732E-05 4.7860E-06 9.7621E-07 6.7853E-05 1.2760E-02 9.8100E-03 1.8990E-02
5	-30.76	-15.38	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0160E-05 4.4270E-03 1.7483E-03 2.2290E-04 1.9040E-05 4.7330E-06 7.5700E-07 0.0000E+00 1.2760E-02 9.8100E-03 1.8990E-02	9.6053E-06 4.3934E-03 1.6798E-03 2.3471E-04 1.9802E-05 4.7868E-06 9.6930E-07 8.9592E-05 1.2760E-02 9.8100E-03 1.8990E-02
6	-15.38	0.00	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0160E-05 4.4270E-03 1.7483E-03 2.2290E-04 1.9040E-05 4.7330E-06 7.5700E-07 0.0000E+00 1.2760E-02 9.8100E-03 1.8990E-02	9.5416E-06 4.3894E-03 1.6718E-03 2.3593E-04 1.9914E-05 4.7929E-06 9.6570E-07 1.0028E-04 1.2760E-02 9.8100E-03 1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	9.5603E-06
			U-238	4.4270E-03	4.3906E-03
			Pu-239	1.7483E-03	1.6740E-03
			Pu-240	2.2290E-04	2.3553E-04
			Pu-241	1.9040E-05	1.9876E-05
			Pu-242	4.7330E-06	4.7907E-06
			Am-241	7.5700E-07	9.6671E-07
			FP	0.0000E+00	9.7279E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	9.6540E-06
			U-238	4.4270E-03	4.3964E-03
			Pu-239	1.7483E-03	1.6858E-03
			Pu-240	2.2290E-04	2.3363E-04
			Pu-241	1.9040E-05	1.9705E-05
			Pu-242	4.7330E-06	4.7813E-06
			Am-241	7.5700E-07	9.7198E-07
			FP	0.0000E+00	8.1783E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	9.7874E-06
			U-238	4.4270E-03	4.4049E-03
			Pu-239	1.7483E-03	1.7035E-03
			Pu-240	2.2290E-04	2.3166E-04
			Pu-241	1.9040E-05	1.9557E-05
			Pu-242	4.7330E-06	4.7755E-06
			Am-241	7.5700E-07	9.7988E-07
			FP	0.0000E+00	5.7644E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3691E-05
			U-238	7.0573E-03	7.0334E-03
			Pu-239	0.0000E+00	2.1955E-05
			Pu-240	0.0000E+00	9.5959E-08
			FP	0.0000E+00	2.1603E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.4 Cycle 10A-4

Table B10A-4.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10A-4

CORE	* * * * *	POWER IN MEGAWATTS			* * * * *
POS.	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR	
1506	2.959E-02	3.863E+00	2.031E-02	3.913E+00	
1404	8.374E-02	4.628E+00	4.589E-02	4.757E+00	
1405	9.610E-03	3.864E+00	7.175E-03	3.881E+00	
1505	1.135E-02	3.538E+00	6.690E-03	3.556E+00	
1507	9.833E-03	3.270E+00	7.354E-03	3.288E+00	
1606	6.255E-03	3.440E+00	4.567E-03	3.451E+00	
1607	9.175E-03	2.840E+00	6.636E-03	2.855E+00	
2507	3.109E-02	4.207E+00	2.281E-02	4.261E+00	
2405	7.328E-02	4.449E+00	4.264E-02	4.565E+00	
2506	1.160E-02	3.878E+00	8.209E-03	3.897E+00	
2508	1.141E-02	4.612E+00	8.388E-03	4.632E+00	
2607	8.010E-03	3.585E+00	5.996E-03	3.599E+00	
2608	5.213E-03	3.489E+00	4.338E-03	3.499E+00	
2609	1.095E-02	3.634E+00	7.128E-03	3.652E+00	

Table B10A-4.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10A-4

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-1	1506	2.861E+15	1.844E+15
MFA-2	2507	3.107E+15	2.004E+15

Table B10A-4.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10A-4

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7595E-02	1.3987E-02	0.0000E+00
-92.78	5.9310E-02	2.7007E-02	0.0000E+00
-87.78	9.5095E-02	4.3215E-02	0.0000E+00
-82.78	1.3765E-01	6.4455E-02	0.0000E+00
-77.78	1.8968E-01	9.3017E-02	0.0000E+00
-72.15	2.4851E-01	1.2993E-01	0.0000E+00
-65.90	3.0691E-01	1.7628E-01	0.0000E+00
-60.35	3.6841E-01	2.3856E-01	2.8315E-02
-55.49	4.5020E-01	3.2302E-01	3.7039E-02
-50.62	5.4584E-01	4.3389E-01	5.1220E-02
-47.17	6.2322E-01	5.3942E-01	6.8216E-02
-43.58	7.0484E-01	6.5960E-01	7.4599E-01
-38.45	8.2181E-01	8.0374E-01	8.3666E-01
-33.32	9.2983E-01	9.2595E-01	9.3643E-01
-28.20	1.0239E+00	1.0272E+00	1.0192E+00
-23.07	1.1021E+00	1.1093E+00	1.0953E+00
-17.94	1.1629E+00	1.1720E+00	1.1548E+00
-12.82	1.2054E+00	1.2151E+00	1.1917E+00
-7.69	1.2295E+00	1.2396E+00	1.2152E+00
-2.56	1.2350E+00	1.2452E+00	1.2204E+00
2.56	1.2218E+00	1.2323E+00	1.2088E+00
7.69	1.1903E+00	1.2009E+00	1.1776E+00
12.82	1.1412E+00	1.1519E+00	1.1290E+00
17.94	1.0759E+00	1.0865E+00	1.0712E+00
23.07	9.9562E-01	1.0049E+00	9.9181E-01
28.20	9.0249E-01	9.0877E-01	9.0007E-01
33.32	7.9887E-01	7.9953E-01	8.0638E-01
38.45	6.8706E-01	6.7678E-01	6.9947E-01
43.58	5.7143E-01	5.4065E-01	6.0009E-01
47.17	4.9264E-01	4.3380E-01	5.1742E-02
50.62	4.1825E-01	3.4020E-01	3.6926E-02
55.49	3.2674E-01	2.4234E-01	2.4441E-02
60.35	2.4774E-01	1.6782E-01	1.6592E-02
64.98	1.9943E-01	1.2549E-01	0.0000E+00
69.39	1.7128E-01	1.0332E-01	0.0000E+00
76.46	1.3099E-01	7.3607E-02	0.0000E+00
86.80	8.5984E-02	4.4584E-02	0.0000E+00
98.14	4.9848E-02	2.4457E-02	0.0000E+00
110.00	2.1429E-02	1.0999E-02	0.0000E+00

Table B10A-4.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10A-4

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5060E-02	1.2741E-02	0.0000E+00
-92.78	5.3832E-02	2.4595E-02	0.0000E+00
-87.78	8.6354E-02	3.9368E-02	0.0000E+00
-82.78	1.2523E-01	5.8792E-02	0.0000E+00
-77.78	1.7333E-01	8.5065E-02	0.0000E+00
-72.15	2.2887E-01	1.1941E-01	0.0000E+00
-65.90	2.8629E-01	1.6365E-01	0.0000E+00
-60.35	3.4853E-01	2.2408E-01	2.6713E-02
-55.49	4.3044E-01	3.0680E-01	3.5515E-02
-50.62	5.2667E-01	4.1681E-01	4.9790E-02
-47.17	6.0506E-01	5.2251E-01	6.6856E-02
-43.58	6.8785E-01	6.4307E-01	7.3100E-01
-38.45	8.0698E-01	7.8882E-01	8.2217E-01
-33.32	9.1736E-01	9.1336E-01	9.2367E-01
-28.20	1.0139E+00	1.0174E+00	1.0086E+00
-23.07	1.0948E+00	1.1024E+00	1.0873E+00
-17.94	1.1585E+00	1.1681E+00	1.1497E+00
-12.82	1.2038E+00	1.2140E+00	1.1895E+00
-7.69	1.2303E+00	1.2408E+00	1.2154E+00
-2.56	1.2375E+00	1.2483E+00	1.2225E+00
2.56	1.2258E+00	1.2369E+00	1.2121E+00
7.69	1.1956E+00	1.2068E+00	1.1822E+00
12.82	1.1479E+00	1.1589E+00	1.1353E+00
17.94	1.0840E+00	1.0946E+00	1.0788E+00
23.07	1.0047E+00	1.0137E+00	1.0006E+00
28.20	9.1185E-01	9.1753E-01	9.0926E-01
33.32	8.0764E-01	8.0748E-01	8.1520E-01
38.45	6.9441E-01	6.8304E-01	7.0766E-01
43.58	5.7696E-01	5.4466E-01	6.0898E-01
47.17	4.9702E-01	4.3591E-01	5.3237E-02
50.62	4.2160E-01	3.4074E-01	3.8040E-02
55.49	3.2928E-01	2.4201E-01	2.5221E-02
60.35	2.4974E-01	1.6744E-01	1.7153E-02
64.98	2.0073E-01	1.2495E-01	0.0000E+00
69.39	1.7166E-01	1.0240E-01	0.0000E+00
76.46	1.3019E-01	7.2258E-02	0.0000E+00
86.80	8.4695E-02	4.3239E-02	0.0000E+00
98.14	4.8685E-02	2.3423E-02	0.0000E+00
110.00	2.0618E-02	1.0349E-02	0.0000E+00

A

CORE POSITION 1506

	0.900	0.905	0.909	0.913	0.916	0.919	0.922	0.924	
	0.911	0.917	0.921	0.925	0.929	0.933	0.936	0.938	0.940
	0.922	0.928	0.933	0.937	0.942	0.945	0.949	0.952	0.954
	0.956	0.959	0.962	0.965	0.968	0.971	0.974	0.977	0.979
	0.933	0.938	0.944	0.949	0.953	0.957	0.961	0.964	0.967
	0.970	0.972	0.975	0.978	0.981	0.984	0.987	0.990	0.992
	0.942	0.948	0.954	0.959	0.964	0.969	0.973	0.976	0.980
	0.982	0.985	0.987	0.990	0.993	0.996	0.999	1.002	1.005
	0.951	0.957	0.963	0.969	0.974	0.979	0.984	0.988	0.991
	0.994	0.997	1.000	1.002	1.005	1.007	1.010	1.013	1.016
	0.959	0.966	0.972	0.978	0.984	0.989	0.994	0.998	1.002
	1.005	1.009	1.011	1.014	1.016	1.019	1.022	1.025	1.028
	0.966	0.973	0.980	0.986	0.992	0.998	1.003	1.007	1.012
	1.015	1.019	1.022	1.025	1.028	1.030	1.033	1.036	1.039
	0.980	0.987	0.994	1.000	1.005	1.011	1.016	1.020	1.025
	1.029	1.032	1.035	1.038	1.041	1.044	1.047	1.050	1.053
	0.994	1.000	1.007	1.012	1.018	1.023	1.028	1.033	1.037
	1.041	1.045	1.048	1.051	1.054	1.057	1.060	1.063	1.066
	1.006	1.013	1.019	1.024	1.030	1.035	1.040	1.044	1.049
	1.053	1.057	1.060	1.063	1.066	1.069	1.072	1.075	1.078
	1.018	1.024	1.030	1.036	1.041	1.046	1.051	1.056	1.060
	1.064	1.068	1.071	1.075	1.078	1.081	1.084	1.087	1.090
	1.029	1.035	1.041	1.046	1.051	1.056	1.061	1.066	1.071
	1.075	1.078	1.081	1.084	1.087	1.090	1.093	1.096	1.099
	1.039	1.045	1.050	1.056	1.061	1.066	1.071	1.076	1.081
	1.084	1.087	1.090	1.093	1.096	1.099	1.102	1.105	1.108
	1.049	1.054	1.060	1.065	1.070	1.076	1.081	1.086	1.091

Table B10A-4.6. Fission Power Distribution by Pin in MFA-2 at BOC 10A-4

CORE POSITION 2507

		1.080	1.064	1.047	1.030	1.012	0.994	0.976	0.957							
		1.087	1.071	1.055	1.038	1.021	1.003	0.985	0.967	0.948						
		1.093	1.077	1.062	1.045	1.028	1.011	0.993	0.975	0.957	0.939					
		1.098	1.083	1.068	1.052	1.035	1.018	1.001	0.983	0.965	0.947	0.929				
		1.102	1.088	1.073	1.057	1.041	1.024	1.007	0.990	0.972	0.954	0.936	0.918			
		1.106	1.092	1.077	1.062	1.046	1.030	1.013	0.996	0.979	0.961	0.943	0.925	0.907		
		1.109	1.095	1.081	1.066	1.051	1.035	1.018	1.002	0.985	0.967	0.950	0.932	0.914	0.895	
		1.112	1.098	1.084	1.069	1.054	1.039	1.023	1.006	0.990	0.972	0.955	0.937	0.919	0.901	0.883
		1.100	1.086	1.072	1.057	1.042	1.026	1.010	0.994	0.977	0.960	0.942	0.925	0.907	0.889	
		1.088	1.074	1.059	1.044	1.029	1.013	0.997	0.981	0.964	0.946	0.929	0.911	0.894		
		1.075	1.061	1.046	1.031	1.016	1.000	0.984	0.967	0.950	0.933	0.915	0.898			
		1.062	1.047	1.033	1.017	1.002	0.986	0.970	0.953	0.936	0.919	0.901				
		1.048	1.034	1.019	1.003	0.988	0.971	0.955	0.938	0.921	0.904					
		1.034	1.019	1.004	0.989	0.973	0.957	0.940	0.924	0.907						
		1.019	1.004	0.989	0.974	0.958	0.942	0.925	0.909							

Table B10A-4.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10A-4

CORE POSITION 1506

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0.881 0.886 0.891 0.895 0.899 0.902 0.904 0.905
0.895 0.901 0.906 0.911 0.915 0.918 0.921 0.923 0.924
0.908 0.915 0.921 0.926 0.930 0.934 0.937 0.939 0.941 0.942
0.921 0.928 0.934 0.940 0.944 0.949 0.952 0.955 0.957 0.959 0.960
0.932 0.940 0.946 0.953 0.958 0.963 0.967 0.970 0.972 0.974 0.976 0.977
0.943 0.951 0.958 0.965 0.970 0.976 0.980 0.984 0.987 0.989 0.991 0.992 0.992
0.952 0.961 0.969 0.976 0.982 0.988 0.993 0.997 1.000 1.003 1.005 1.006 1.007 1.008
0.961 0.970 0.978 0.986 0.993 0.999 1.004 1.009 1.013 1.016 1.019 1.020 1.021 1.022 1.022
0.978 0.987 0.995 1.003 1.009 1.015 1.020 1.025 1.028 1.031 1.033 1.035 1.035 1.035
0.995 1.003 1.011 1.019 1.025 1.031 1.036 1.040 1.043 1.045 1.047 1.048 1.048
1.011 1.019 1.027 1.034 1.040 1.046 1.050 1.054 1.057 1.059 1.060 1.061
1.026 1.035 1.042 1.049 1.055 1.060 1.064 1.067 1.070 1.071 1.072
1.041 1.050 1.057 1.063 1.069 1.073 1.077 1.080 1.082 1.083
1.056 1.064 1.071 1.077 1.082 1.086 1.089 1.092 1.093
1.070 1.077 1.084 1.089 1.094 1.098 1.101 1.103

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Table B10A-4.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10A-4

CORE POSITION 2507

[illegible]

Table B10A-4.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10A-4

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8694E+15	2.1715E+15
SE	1.6702E+15	2.2491E+15
SW	1.6019E+15	2.0399E+15
W	1.7619E+15	1.7879E+15
NW	1.9794E+15	1.7228E+15
NE	2.0353E+15	1.8899E+15

Table B10A-4.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10A-4

CORE POS.	MEASURED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1506	1029	114940
1404	914	225440
1405	889	208130
1505	882	208130
1507	872	208130
1606	900	170680
1607	869	170680
2507	1063	114940
2405	946	192410
2506	901	197920
2508	931	208130
2607	926	163690
2608	905	170680
2609	914	170680

Assembly flows are based on a calculated core pressure drop of 110.6 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E10A-4.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 10A-4

CORE POS.	***** BELOW CORE	POWER IN CORE	***** ABOVE CORE	***** TOTAL PWR
1506	3.241E-02	3.799E+00	2.518E-02	3.857E+00
1404	8.461E-02	4.559E+00	5.420E-02	4.698E+00
1405	9.766E-03	3.786E+00	8.299E-03	3.804E+00
1505	1.127E-02	3.577E+00	8.230E-03	3.597E+00
1507	9.733E-03	3.213E+00	8.314E-03	3.231E+00
1606	6.404E-03	3.447E+00	5.535E-03	3.459E+00
1607	9.048E-03	2.810E+00	7.536E-03	2.826E+00
2507	3.402E-02	4.044E+00	2.767E-02	4.106E+00
2405	7.395E-02	4.282E+00	4.958E-02	4.406E+00
2506	1.148E-02	3.770E+00	9.332E-03	3.791E+00
2508	1.138E-02	4.459E+00	9.609E-03	4.480E+00
2607	7.988E-03	3.483E+00	6.782E-03	3.498E+00
2608	5.315E-03	3.370E+00	4.923E-03	3.381E+00
2609	1.072E-02	3.522E+00	8.034E-03	3.541E+00

Table E10A-4.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 10A-4

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.869E+15	1.838E+15
MFA-2	2507	3.051E+15	1.954E+15

Table E10A-4.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 10A-4

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6179E-02	1.3345E-02	0.0000E+00
-92.78	5.6273E-02	2.5769E-02	0.0000E+00
-87.78	9.0229E-02	4.1233E-02	0.0000E+00
-82.78	1.3062E-01	6.1502E-02	0.0000E+00
-77.78	1.8001E-01	8.8751E-02	0.0000E+00
-72.15	2.3585E-01	1.2398E-01	0.0000E+00
-65.90	2.9127E-01	1.6822E-01	0.0000E+00
-60.35	3.4958E-01	2.2778E-01	3.3357E-02
-55.49	4.2719E-01	3.0808E-01	4.2119E-02
-50.62	5.1790E-01	4.1317E-01	5.5966E-02
-47.17	5.9130E-01	5.1298E-01	7.2236E-02
-43.58	6.6870E-01	6.2663E-01	7.1007E-01
-38.45	7.8058E-01	7.6406E-01	7.9754E-01
-33.32	8.8508E-01	8.8184E-01	8.9462E-01
-28.20	9.7757E-01	9.8093E-01	9.7199E-01
-23.07	1.0565E+00	1.0633E+00	1.0489E+00
-17.94	1.1205E+00	1.1290E+00	1.1115E+00
-12.82	1.1685E+00	1.1775E+00	1.1510E+00
-7.69	1.2006E+00	1.2099E+00	1.1823E+00
-2.56	1.2164E+00	1.2261E+00	1.1978E+00
2.56	1.2157E+00	1.2257E+00	1.1989E+00
7.69	1.1980E+00	1.2085E+00	1.1815E+00
12.82	1.1635E+00	1.1743E+00	1.1476E+00
17.94	1.1122E+00	1.1232E+00	1.1077E+00
23.07	1.0437E+00	1.0536E+00	1.0401E+00
28.20	9.5881E-01	9.6573E-01	9.5681E-01
33.32	8.5936E-01	8.6032E-01	8.7280E-01
38.45	7.4714E-01	7.3606E-01	7.6554E-01
43.58	6.2724E-01	5.9339E-01	6.6331E-01
47.17	5.4366E-01	4.7864E-01	6.2155E-02
50.62	4.6413E-01	3.7764E-01	4.5746E-02
55.49	3.6477E-01	2.7079E-01	3.1534E-02
60.35	2.7810E-01	1.8863E-01	2.2269E-02
64.98	2.2492E-01	1.4162E-01	0.0000E+00
69.39	1.9361E-01	1.1684E-01	0.0000E+00
76.46	1.4850E-01	8.3473E-02	0.0000E+00
86.80	9.7675E-02	5.0667E-02	0.0000E+00
98.14	5.6647E-02	2.7816E-02	0.0000E+00
110.00	2.4303E-02	1.2495E-02	0.0000E+00

Table E10A-4.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 10A-4

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.4099E-02	1.2324E-02	0.0000E+00
-92.78	5.1768E-02	2.3786E-02	0.0000E+00
-87.78	8.3038E-02	3.8064E-02	0.0000E+00
-82.78	1.2041E-01	5.6826E-02	0.0000E+00
-77.78	1.6662E-01	8.2190E-02	0.0000E+00
-72.15	2.1997E-01	1.1533E-01	0.0000E+00
-65.90	2.7501E-01	1.5801E-01	0.0000E+00
-60.35	3.3448E-01	2.1636E-01	3.2407E-02
-55.49	4.1279E-01	2.9572E-01	4.1384E-02
-50.62	5.0478E-01	4.0091E-01	5.5481E-02
-47.17	5.7957E-01	5.0173E-01	7.1958E-02
-43.58	6.5863E-01	6.1665E-01	7.0285E-01
-38.45	7.7316E-01	7.5659E-01	7.9120E-01
-33.32	8.8034E-01	8.7714E-01	8.9029E-01
-28.20	9.7536E-01	9.7901E-01	9.6944E-01
-23.07	1.0568E+00	1.0642E+00	1.0486E+00
-17.94	1.1232E+00	1.1322E+00	1.1136E+00
-12.82	1.1732E+00	1.1828E+00	1.1549E+00
-7.69	1.2067E+00	1.2164E+00	1.1876E+00
-2.56	1.2228E+00	1.2329E+00	1.2033E+00
2.56	1.2215E+00	1.2320E+00	1.2037E+00
7.69	1.2027E+00	1.2136E+00	1.1852E+00
12.82	1.1667E+00	1.1777E+00	1.1499E+00
17.94	1.1137E+00	1.1246E+00	1.1085E+00
23.07	1.0436E+00	1.0531E+00	1.0395E+00
28.20	9.5740E-01	9.6365E-01	9.5492E-01
33.32	8.5680E-01	8.5695E-01	8.7025E-01
38.45	7.4381E-01	7.3177E-01	7.6302E-01
43.58	6.2360E-01	5.8861E-01	6.6320E-01
47.17	5.4045E-01	4.7374E-01	6.3544E-02
50.62	4.6149E-01	3.7284E-01	4.7019E-02
55.49	3.6344E-01	2.6709E-01	3.2682E-02
60.35	2.7806E-01	1.8643E-01	2.3303E-02
64.98	2.2528E-01	1.4009E-01	0.0000E+00
69.39	1.9351E-01	1.1529E-01	0.0000E+00
76.46	1.4766E-01	8.1858E-02	0.0000E+00
86.80	9.6566E-02	4.9259E-02	0.0000E+00
98.14	5.5677E-02	2.6783E-02	0.0000E+00
110.00	2.3593E-02	1.1851E-02	0.0000E+00

Table E10A-4.5. Fission Power Distribution by Pin in MFA-1 at EOC 10A-4

CORE POSITION 1506

0.902	0.906	0.909	0.912	0.915	0.917	0.919	0.921												
0.914	0.918	0.922	0.925	0.928	0.931	0.933	0.935	0.937											
0.926	0.930	0.934	0.938	0.941	0.944	0.947	0.949	0.951	0.953										
0.937	0.941	0.946	0.950	0.953	0.957	0.960	0.962	0.965	0.966	0.968									
0.947	0.952	0.957	0.961	0.965	0.969	0.972	0.975	0.977	0.979	0.981	0.983								
0.956	0.962	0.967	0.971	0.976	0.979	0.983	0.986	0.989	0.992	0.994	0.996	0.997							
0.966	0.971	0.976	0.981	0.985	0.990	0.993	0.997	1.000	1.003	1.006	1.008	1.010	1.012						
0.974	0.980	0.985	0.990	0.995	0.999	1.003	1.007	1.010	1.013	1.016	1.019	1.021	1.023	1.025					
0.987	0.993	0.998	1.003	1.007	1.012	1.016	1.019	1.023	1.026	1.029	1.032	1.034	1.036						
1.000	1.006	1.011	1.015	1.020	1.024	1.028	1.031	1.035	1.038	1.041	1.044	1.047							
1.012	1.017	1.022	1.027	1.031	1.035	1.039	1.043	1.046	1.050	1.053	1.056								
1.024	1.028	1.033	1.037	1.042	1.046	1.050	1.054	1.057	1.061	1.064									
1.034	1.039	1.043	1.047	1.052	1.056	1.060	1.064	1.068	1.072										
1.044	1.048	1.053	1.057	1.061	1.065	1.070	1.074	1.078											
1.053	1.057	1.061	1.066	1.070	1.074	1.079	1.083												

Table E10A-4.6. Fission Power Distribution by Pin in MFA-2 at EOC 10A-4

CORE POSITION 2507

						1.082	1.065	1.048	1.031	1.014	0.996	0.977	0.959							
						1.088	1.072	1.056	1.039	1.022	1.004	0.986	0.968	0.949						
						1.094	1.078	1.062	1.046	1.029	1.012	0.994	0.976	0.958	0.939					
						1.099	1.084	1.068	1.052	1.035	1.018	1.001	0.983	0.965	0.947	0.929				
						1.103	1.088	1.073	1.057	1.041	1.025	1.008	0.990	0.972	0.955	0.936	0.918			
						1.107	1.092	1.077	1.062	1.046	1.030	1.013	0.996	0.979	0.961	0.943	0.925	0.907		
						1.110	1.096	1.081	1.066	1.050	1.035	1.018	1.001	0.984	0.967	0.949	0.931	0.913	0.895	
						1.112	1.098	1.084	1.069	1.054	1.038	1.022	1.006	0.989	0.972	0.954	0.937	0.919	0.901	0.883
						1.101	1.087	1.072	1.057	1.042	1.026	1.010	0.993	0.976	0.959	0.941	0.924	0.906	0.888	
						1.088	1.074	1.059	1.044	1.029	1.013	0.997	0.980	0.963	0.946	0.928	0.910	0.893		
						1.076	1.061	1.046	1.031	1.015	0.999	0.983	0.966	0.949	0.932	0.914	0.897			
						1.062	1.048	1.033	1.017	1.001	0.985	0.969	0.952	0.935	0.918	0.900				
						1.049	1.034	1.019	1.003	0.987	0.971	0.954	0.937	0.920	0.903					
						1.034	1.019	1.004	0.988	0.972	0.956	0.940	0.923	0.906						
						1.020	1.005	0.989	0.973	0.957	0.941	0.925	0.908							

Table E10A-4.7. Fast Flux Distribution by Pin in MFA-1 at EOC 10A-4

CORE POSITION 1506

0.883	0.887	0.891	0.895	0.898	0.900	0.901	0.903												
0.898	0.903	0.907	0.911	0.914	0.917	0.919	0.920	0.921											
0.911	0.917	0.922	0.926	0.930	0.933	0.935	0.937	0.938	0.939										
0.924	0.930	0.936	0.940	0.944	0.948	0.951	0.953	0.955	0.956	0.956									
0.937	0.943	0.949	0.954	0.958	0.962	0.966	0.968	0.970	0.971	0.972	0.973								
0.948	0.955	0.961	0.967	0.972	0.976	0.979	0.982	0.985	0.987	0.988	0.988	0.988							
0.958	0.966	0.972	0.978	0.984	0.989	0.993	0.996	0.999	1.001	1.002	1.003	1.003	1.003						
0.968	0.975	0.983	0.989	0.995	1.000	1.005	1.009	1.012	1.014	1.016	1.017	1.018	1.018	1.017					
0.985	0.992	0.999	1.006	1.011	1.016	1.020	1.024	1.027	1.029	1.030	1.031	1.031	1.031						
1.001	1.008	1.015	1.021	1.027	1.031	1.035	1.039	1.041	1.043	1.044	1.044	1.044	1.044						
1.017	1.024	1.031	1.036	1.042	1.046	1.050	1.052	1.054	1.056	1.057	1.057								
1.032	1.039	1.045	1.051	1.056	1.060	1.063	1.065	1.067	1.068	1.069									
1.047	1.053	1.059	1.065	1.069	1.073	1.076	1.078	1.079	1.080										
1.061	1.067	1.073	1.078	1.082	1.085	1.088	1.089	1.090											
1.074	1.080	1.086	1.090	1.094	1.097	1.099	1.100												

Table E10A-4.8. Fast Flux Distribution by Pin in MFA-2 at EOC 10A-4

CORE POSITION 2507

	1.084	1.067	1.050	1.032	1.014	0.994	0.975	0.954						
	1.092	1.075	1.058	1.041	1.023	1.004	0.985	0.965	0.945					
	1.098	1.083	1.066	1.049	1.031	1.013	0.994	0.975	0.955	0.934				
	1.104	1.089	1.073	1.056	1.039	1.021	1.002	0.983	0.964	0.944	0.923			
	1.109	1.094	1.079	1.062	1.045	1.028	1.010	0.991	0.972	0.952	0.932	0.911		
	1.114	1.099	1.084	1.068	1.051	1.034	1.016	0.998	0.979	0.960	0.940	0.919	0.898	
	1.118	1.103	1.088	1.072	1.056	1.039	1.022	1.004	0.985	0.966	0.947	0.926	0.906	0.884
1.120	1.106	1.091	1.076	1.060	1.044	1.026	1.009	0.991	0.972	0.952	0.933	0.912	0.891	0.870
	1.109	1.094	1.079	1.063	1.047	1.030	1.013	0.995	0.976	0.958	0.938	0.918	0.897	0.876
	1.096	1.081	1.066	1.050	1.033	1.016	0.998	0.980	0.962	0.942	0.923	0.902	0.882	
	1.082	1.067	1.051	1.035	1.018	1.001	0.983	0.965	0.946	0.926	0.906	0.886		
	1.068	1.052	1.036	1.020	1.003	0.985	0.967	0.948	0.929	0.910	0.890			
	1.053	1.037	1.021	1.004	0.986	0.969	0.950	0.931	0.912	0.892				
	1.037	1.021	1.004	0.987	0.969	0.951	0.932	0.913	0.894					
	1.020	1.003	0.986	0.969	0.951	0.933	0.914	0.895						

Table E10A-4.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 10A-4

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8777E+15	2.1200E+15
SE	1.6743E+15	2.1949E+15
SW	1.5952E+15	1.9935E+15
W	1.7491E+15	1.7451E+15
NW	1.9651E+15	1.6780E+15
NE	2.0293E+15	1.8430E+15

Table E10A-4.10. Assembly Outlet Temperatures and
Flow Rates at EOC 10A-4

CORE POS.	OUTLET TEMP. (DEG F)		FLOW RATE (LB/H)
	MEASURED	CALCULATED	
1506	1027	1032	114940
1404	911	908	225440
1405	885	883	208130
1505	884	870	208130
1507	866	852	208130
1606	899	898	170680
1607	868	862	170680
2507	1050	1053	114940
2405	938	930	192410
2506	895	887	197920
2508	920	915	208130
2607	918	906	163690
2608	899	894	170680
2609	909	892	170680

Assembly flows are based on a calculated core pressure drop of 110.6 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E10A-4.17. Composition of MFA-1 at EOC 10A-4

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3056E-05
			U-238	7.0573E-03	7.0015E-03
			Pu-239	0.0000E+00	5.0743E-05
			Pu-240	0.0000E+00	5.6431E-07
			FP	0.0000E+00	5.2535E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	1.0076E-05
			U-238	4.4499E-03	4.4069E-03
			Pu-239	1.7520E-03	1.6657E-03
			Pu-240	2.2340E-04	2.4037E-04
			Pu-241	1.9280E-05	2.0419E-05
			Pu-242	4.7430E-06	4.8344E-06
			Am-241	7.6680E-07	1.1275E-06
			FP	0.0000E+00	1.1114E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	9.8896E-06
			U-238	4.4499E-03	4.3951E-03
			Pu-239	1.7520E-03	1.6416E-03
			Pu-240	2.2340E-04	2.4211E-04
			Pu-241	1.9280E-05	2.0512E-05
			Pu-242	4.7430E-06	4.8357E-06
			Am-241	7.6680E-07	1.1158E-06
			FP	0.0000E+00	1.4547E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	9.7832E-06
			U-238	4.4499E-03	4.3886E-03
			Pu-239	1.7520E-03	1.6288E-03
			Pu-240	2.2340E-04	2.4402E-04
			Pu-241	1.9280E-05	2.0697E-05
			Pu-242	4.7430E-06	4.8466E-06
			Am-241	7.6680E-07	1.1100E-06
			FP	0.0000E+00	1.6258E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	9.8089E-06
			U-238	4.4499E-03	4.3902E-03
			Pu-239	1.7520E-03	1.6319E-03
			Pu-240	2.2340E-04	2.4347E-04
			Pu-241	1.9280E-05	2.0644E-05
			Pu-242	4.7430E-06	4.8432E-06
			Am-241	7.6680E-07	1.1112E-06
			FP	0.0000E+00	1.5852E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	9.9651E-06
			U-238	4.4499E-03	4.3995E-03
			Pu-239	1.7520E-03	1.6502E-03
			Pu-240	2.2340E-04	2.4053E-04
			Pu-241	1.9280E-05	2.0361E-05
			Pu-242	4.7430E-06	4.8262E-06
			Am-241	7.6680E-07	1.1193E-06
			FP	0.0000E+00	1.3413E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	1.0190E-05
			U-238	4.4499E-03	4.4134E-03
			Pu-239	1.7520E-03	1.6783E-03
			Pu-240	2.2340E-04	2.3749E-04
			Pu-241	1.9280E-05	2.0125E-05
			Pu-242	4.7430E-06	4.8156E-06
			Am-241	7.6680E-07	1.1324E-06
			FP	0.0000E+00	9.5157E-05
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3385E-05
			U-238	7.0573E-03	7.0174E-03
			Pu-239	0.0000E+00	3.6387E-05
			Pu-240	0.0000E+00	2.6913E-07
			FP	0.0000E+00	3.7929E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10A-4.18. Composition of MFA-2 at EOC 10A-4

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.3078E-05
			U-238	7.0573E-03	7.0024E-03
			Pu-239	0.0000E+00	4.9911E-05
			Pu-240	0.0000E+00	5.4997E-07
			FP	0.0000E+00	5.2479E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	9.4363E-06
			U-238	4.4270E-03	4.3837E-03
			Pu-239	1.7483E-03	1.6614E-03
			Pu-240	2.2290E-04	2.4016E-04
			Pu-241	1.9040E-05	2.0234E-05
			Pu-242	4.7330E-06	4.8239E-06
			Am-241	7.5700E-07	1.1123E-06
			FP	0.0000E+00	1.1174E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	9.2542E-06
			U-238	4.4270E-03	4.3713E-03
			Pu-239	1.7483E-03	1.6363E-03
			Pu-240	2.2290E-04	2.4205E-04
			Pu-241	1.9040E-05	2.0349E-05
			Pu-242	4.7330E-06	4.8256E-06
			Am-241	7.5700E-07	1.1004E-06
			FP	0.0000E+00	1.4732E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	9.1478E-06
			U-238	4.4270E-03	4.3644E-03
			Pu-239	1.7483E-03	1.6229E-03
			Pu-240	2.2290E-04	2.4407E-04
			Pu-241	1.9040E-05	2.0551E-05
			Pu-242	4.7330E-06	4.8372E-06
			Am-241	7.5700E-07	1.0942E-06
			FP	0.0000E+00	1.6542E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	9.1713E-06
			U-238	4.4270E-03	4.3660E-03
			Pu-239	1.7483E-03	1.6257E-03
			Pu-240	2.2290E-04	2.4356E-04
			Pu-241	1.9040E-05	2.0499E-05
			Pu-242	4.7330E-06	4.8340E-06
			Am-241	7.5700E-07	1.0953E-06
			FP	0.0000E+00	1.6162E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	9.3168E-06
			U-238	4.4270E-03	4.3753E-03
			Pu-239	1.7483E-03	1.6440E-03
			Pu-240	2.2290E-04	2.4066E-04
			Pu-241	1.9040E-05	2.0214E-05
			Pu-242	4.7330E-06	4.8175E-06
			Am-241	7.5700E-07	1.1034E-06
			FP	0.0000E+00	1.3721E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	9.5310E-06
			U-238	4.4270E-03	4.3893E-03
			Pu-239	1.7483E-03	1.6725E-03
			Pu-240	2.2290E-04	2.3765E-04
			Pu-241	1.9040E-05	1.9974E-05
			Pu-242	4.7330E-06	4.8077E-06
			Am-241	7.5700E-07	1.1166E-06
			FP	0.0000E+00	9.7751E-05
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.3355E-05
			U-238	7.0573E-03	7.0158E-03
			Pu-239	0.0000E+00	3.7793E-05
			Pu-240	0.0000E+00	2.9713E-07
			FP	0.0000E+00	3.9889E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.5 Cycle 10B

Table B10B.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10B

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	3.473E-02	3.674E+00	2.243E-02	3.731E+00
1404	8.999E-02	4.349E+00	4.727E-02	4.486E+00
1405	0.000E+00	6.471E+00	0.000E+00	6.471E+00
1505	6.642E-03	4.040E+00	4.411E-03	4.051E+00
1507	1.025E-02	3.107E+00	7.320E-03	3.124E+00
1606	6.841E-03	3.304E+00	4.704E-03	3.316E+00
1607	9.531E-03	2.732E+00	6.635E-03	2.748E+00
2507	3.646E-02	4.003E+00	2.503E-02	4.065E+00
2405	1.008E-02	4.134E+00	7.467E-03	4.151E+00
2506	6.915E-03	4.386E+00	5.308E-03	4.398E+00
2508	1.223E-02	4.393E+00	8.597E-03	4.414E+00
2607	8.402E-03	3.401E+00	6.054E-03	3.415E+00
2608	5.672E-03	3.352E+00	4.515E-03	3.362E+00
2609	6.230E-03	4.224E+00	4.945E-03	4.235E+00

Table B10B.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10B

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.791E+15	1.853E+15
MFA-2	2507	3.016E+15	1.957E+15

Table B10B.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10B

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8660E-02	1.4202E-02	0.0000E+00
-92.78	6.1544E-02	2.7429E-02	0.0000E+00
-87.78	9.8613E-02	4.3911E-02	0.0000E+00
-82.78	1.4263E-01	6.5541E-02	0.0000E+00
-77.78	1.9637E-01	9.4660E-02	0.0000E+00
-72.15	2.5706E-01	1.3238E-01	0.0000E+00
-65.90	3.1736E-01	1.8002E-01	0.0000E+00
-60.35	3.8094E-01	2.4458E-01	3.6638E-02
-55.49	4.6530E-01	3.3192E-01	4.6500E-02
-50.62	5.6352E-01	4.4652E-01	6.2213E-02
-47.17	6.4245E-01	5.5513E-01	8.0727E-02
-43.58	7.2536E-01	6.7808E-01	7.6944E-01
-38.45	8.4374E-01	8.2492E-01	8.6192E-01
-33.32	9.5221E-01	9.4819E-01	9.6281E-01
-28.20	1.0454E+00	1.0490E+00	1.0401E+00
-23.07	1.1212E+00	1.1289E+00	1.1140E+00
-17.94	1.1782E+00	1.1879E+00	1.1697E+00
-12.82	1.2154E+00	1.2259E+00	1.1982E+00
-7.69	1.2331E+00	1.2439E+00	1.2153E+00
-2.56	1.2317E+00	1.2427E+00	1.2136E+00
2.56	1.2121E+00	1.2232E+00	1.1960E+00
7.69	1.1757E+00	1.1869E+00	1.1600E+00
12.82	1.1239E+00	1.1350E+00	1.1090E+00
17.94	1.0580E+00	1.0687E+00	1.0540E+00
23.07	9.7848E-01	9.8763E-01	9.7527E-01
28.20	8.8675E-01	8.9271E-01	8.8479E-01
33.32	7.8459E-01	7.8479E-01	7.9642E-01
38.45	6.7410E-01	6.6317E-01	6.8965E-01
43.58	5.6003E-01	5.2841E-01	5.8982E-01
47.17	4.8402E-01	4.2513E-01	5.7224E-02
50.62	4.1383E-01	3.3603E-01	4.2069E-02
55.49	3.2800E-01	2.4309E-01	2.9073E-02
60.35	2.5277E-01	1.7129E-01	2.0592E-02
64.98	2.0457E-01	1.2864E-01	0.0000E+00
69.39	1.7565E-01	1.0560E-01	0.0000E+00
76.46	1.3414E-01	7.4736E-02	0.0000E+00
86.80	8.8291E-02	4.5086E-02	0.0000E+00
98.14	5.1709E-02	2.4785E-02	0.0000E+00
110.00	2.2429E-02	1.1198E-02	0.0000E+00

Table B10B.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10B

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5586E-02	1.2970E-02	0.0000E+00
-92.78	5.4933E-02	2.5033E-02	0.0000E+00
-87.78	8.8076E-02	4.0058E-02	0.0000E+00
-82.78	1.2768E-01	5.9806E-02	0.0000E+00
-77.78	1.7671E-01	8.6514E-02	0.0000E+00
-72.15	2.3360E-01	1.2149E-01	0.0000E+00
-65.90	2.9288E-01	1.6681E-01	0.0000E+00
-60.35	3.5697E-01	2.2888E-01	3.5079E-02
-55.49	4.4044E-01	3.1310E-01	4.4821E-02
-50.62	5.3782E-01	4.2488E-01	6.0040E-02
-47.17	6.1702E-01	5.3230E-01	7.7936E-02
-43.58	7.0086E-01	6.5493E-01	7.5091E-01
-38.45	8.2168E-01	8.0305E-01	8.4138E-01
-33.32	9.3305E-01	9.2889E-01	9.4359E-01
-28.20	1.0295E+00	1.0331E+00	1.0232E+00
-23.07	1.1091E+00	1.1170E+00	1.1004E+00
-17.94	1.1702E+00	1.1803E+00	1.1603E+00
-12.82	1.2119E+00	1.2229E+00	1.1930E+00
-7.69	1.2340E+00	1.2453E+00	1.2145E+00
-2.56	1.2367E+00	1.2482E+00	1.2170E+00
2.56	1.2205E+00	1.2322E+00	1.2027E+00
7.69	1.1867E+00	1.1982E+00	1.1694E+00
12.82	1.1365E+00	1.1476E+00	1.1200E+00
17.94	1.0711E+00	1.0815E+00	1.0659E+00
23.07	9.9147E-01	9.9994E-01	9.8731E-01
28.20	8.9903E-01	9.0411E-01	8.9641E-01
33.32	7.9575E-01	7.9495E-01	8.0787E-01
38.45	6.8386E-01	6.7202E-01	7.0127E-01
43.58	5.6799E-01	5.3567E-01	6.0483E-01
47.17	4.8951E-01	4.2874E-01	5.8736E-02
50.62	4.1562E-01	3.3536E-01	4.3165E-02
55.49	3.2514E-01	2.3852E-01	2.9747E-02
60.35	2.4675E-01	1.6520E-01	2.0985E-02
64.98	1.9826E-01	1.2316E-01	0.0000E+00
69.39	1.6952E-01	1.0089E-01	0.0000E+00
76.46	1.2865E-01	7.1169E-02	0.0000E+00
86.80	8.4008E-02	4.2658E-02	0.0000E+00
98.14	4.8631E-02	2.3205E-02	0.0000E+00
110.00	2.0726E-02	1.0302E-02	0.0000E+00

Table B10B.5. Fission Power Distribution by Pin in MFA-1 at BOC 10B

CORE POSITION 1506

0.906	0.910	0.914	0.917	0.919	0.921	0.923	0.924										
0.917	0.922	0.926	0.929	0.932	0.935	0.937	0.939	0.940									
0.928	0.933	0.937	0.941	0.945	0.948	0.950	0.952	0.954	0.955								
0.938	0.943	0.948	0.953	0.957	0.960	0.963	0.965	0.967	0.968	0.969							
0.947	0.953	0.959	0.963	0.968	0.972	0.975	0.977	0.979	0.981	0.982	0.983						
0.956	0.962	0.968	0.973	0.978	0.982	0.986	0.989	0.991	0.993	0.994	0.995	0.995					
0.964	0.971	0.977	0.983	0.988	0.992	0.996	0.999	1.002	1.004	1.005	1.006	1.007	1.007				
0.972	0.979	0.985	0.991	0.996	1.001	1.005	1.009	1.011	1.014	1.016	1.017	1.018	1.018	1.018			
0.986	0.993	0.999	1.004	1.009	1.014	1.017	1.020	1.023	1.025	1.026	1.027	1.028	1.028				
1.000	1.006	1.012	1.017	1.021	1.025	1.029	1.031	1.033	1.035	1.036	1.037	1.037					
1.013	1.019	1.024	1.029	1.033	1.036	1.039	1.041	1.043	1.044	1.045	1.045						
1.025	1.031	1.035	1.039	1.043	1.046	1.048	1.050	1.051	1.052	1.053							
1.037	1.041	1.045	1.049	1.052	1.054	1.056	1.058	1.059	1.059								
1.047	1.051	1.055	1.058	1.060	1.062	1.064	1.065	1.066									
1.056	1.060	1.063	1.065	1.068	1.069	1.071	1.071										

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Table B10B.6. Fission Power Distribution by Pin in MFA-2 at BOC 10B

CORE POSITION 2507

1.077	1.061	1.045	1.027	1.010	0.991	0.973	0.954							
1.084	1.068	1.052	1.035	1.018	1.000	0.982	0.964	0.945						
1.090	1.075	1.059	1.043	1.026	1.009	0.991	0.973	0.955	0.936					
1.095	1.080	1.065	1.049	1.033	1.016	0.999	0.981	0.963	0.945	0.927				
1.100	1.085	1.070	1.055	1.039	1.023	1.006	0.989	0.971	0.953	0.935	0.916			
1.103	1.089	1.075	1.060	1.044	1.028	1.012	0.995	0.978	0.960	0.942	0.924	0.906		
1.107	1.093	1.079	1.064	1.049	1.033	1.017	1.001	0.984	0.967	0.949	0.931	0.913	0.895	
1.109	1.096	1.082	1.068	1.053	1.038	1.022	1.006	0.989	0.972	0.955	0.937	0.919	0.901	0.883
1.099	1.085	1.071	1.056	1.042	1.026	1.010	0.994	0.977	0.960	0.943	0.925	0.907	0.889	
1.087	1.073	1.059	1.045	1.030	1.014	0.998	0.982	0.965	0.948	0.930	0.913	0.895		
1.075	1.062	1.047	1.032	1.017	1.001	0.985	0.969	0.952	0.935	0.917	0.900			
1.063	1.049	1.035	1.020	1.004	0.988	0.972	0.956	0.939	0.921	0.904				
1.051	1.036	1.022	1.007	0.991	0.975	0.959	0.942	0.925	0.908					
1.038	1.023	1.008	0.993	0.977	0.961	0.945	0.928	0.911						
1.024	1.010	0.995	0.979	0.963	0.947	0.930	0.914							

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Table B10B.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10B

CORE POSITION 1506

0.872	0.878	0.884	0.889	0.893	0.897	0.900	0.902										
0.886	0.893	0.899	0.904	0.909	0.913	0.917	0.920	0.922									
0.900	0.907	0.914	0.919	0.925	0.929	0.934	0.937	0.940	0.942								
0.913	0.920	0.927	0.934	0.939	0.944	0.949	0.953	0.957	0.960	0.962							
0.925	0.933	0.940	0.947	0.953	0.959	0.964	0.968	0.972	0.976	0.979	0.982						
0.936	0.944	0.952	0.959	0.966	0.972	0.977	0.982	0.987	0.991	0.995	0.998	1.001					
0.946	0.955	0.963	0.970	0.977	0.984	0.990	0.996	1.001	1.005	1.010	1.013	1.017	1.019				
0.956	0.965	0.973	0.981	0.988	0.995	1.002	1.008	1.013	1.018	1.023	1.028	1.031	1.035	1.038			
0.974	0.982	0.991	0.998	1.005	1.012	1.019	1.025	1.031	1.036	1.041	1.045	1.049	1.053				
0.991	0.999	1.007	1.015	1.022	1.029	1.035	1.042	1.047	1.053	1.058	1.062	1.066					
1.007	1.015	1.023	1.031	1.038	1.045	1.051	1.058	1.064	1.069	1.074	1.079						
1.022	1.031	1.039	1.046	1.053	1.060	1.067	1.073	1.079	1.085	1.090							
1.037	1.045	1.053	1.061	1.068	1.075	1.082	1.088	1.095	1.100								
1.051	1.060	1.067	1.075	1.082	1.090	1.096	1.103	1.109									
1.065	1.073	1.081	1.089	1.096	1.103	1.110	1.117										

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Table B10B.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10B

CORE POSITION 2507

[illegible]

Table B10B.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10B

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8738E+15	2.1211E+15
SE	1.6634E+15	2.1766E+15
SW	1.5985E+15	1.9890E+15
W	1.7757E+15	1.7425E+15
NW	2.0314E+15	1.6907E+15
NE	2.0435E+15	1.8708E+15

Table B10B.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10B

CORE POS.	OUTLET TEMP. (DEG F)		FLOW RATE (LB/H)
	MEASURED	CALCULATED	
1506	1022	1023	115440
1404	906	899	228160
1405	1042	1037	188170
1505	898	890	209040
1507	864	847	209040
1606	893	890	171430
1607	867	856	171430
2507	1043	1051	115440
2405	897	894	209060
2506	913	905	209040
2508	917	912	209040
2607	910	901	164410
2608	894	896	171430
2609	950	959	164410

Assembly flows are based on a calculated core pressure drop of 111.5 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B108.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 108

TEMPERATURE MAP FOR BUNDLE 43		ASSEMBLY NO. 1506		MFA-1															
AXIAL HEIGHT 44.271 IN																			
862	868	871	872	873	872	871	861												
890	896	899	900	900	899	898	896	887											
917	924	926	927	926	924	923	921	922											
882	881	919	969	1000	1006	1007	1007	1006	1000	974	930	896	861						
885	904	923	983	1029	1042	1045	1046	1045	1044	1032	990	936	901	865					
886	907	926	988	1038	1054	1058	1059	1060	1060	1057	1043	996	939	904	868				
887	909	929	991	1041	1058	1063	1065	1065	1066	1067	1064	1048	1000	942	907	871			
888	910	932	993	1043	1061	1066	1068	1069	1070	1071	1072	1069	1053	1003	943	909	873		
887	911	933	992	1045	1064	1069	1071	1072	1073	1075	1076	1077	1074	1057	1005	945	910	875	
885	909	931	981	1041	1063	1071	1074	1075	1076	1078	1079	1081	1081	1077	1055	996	946	912	876
883	905	923	980	1043	1047	1074	1076	1078	1079	1080	1082	1083	1084	1084	1082	1081	950	929	908
886	909	932	985	1052	1073	1078	1081	1082	1084	1085	1086	1087	1084	1067	1016	962	961	940	
889	913	936	1002	1077	1083	1085	1087	1089	1089	1090	1091	1090	1087	1070	1020	963	963	962	
891	916	940	1006	1062	1082	1087	1089	1091	1092	1093	1092	1089	1072	1022	963	963	964		
893	919	944	1010	1066	1084	1088	1091	1093	1093	1090	1073	1032	941	963	965				
893	920	947	1012	1063	1078	1082	1083	1084	1082	1068	1020	958	961	965					
892	919	946	1000	1034	1043	1045	1046	1044	1034	1007	853	858	963						
910	914	918	921	923	925	925	924	937											
879	886	888	892	891	892	893	892	924											

Table B10B.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10B

[illegible]

Table B10B.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10B

TEMPERATURE MAP FOR BUNDLE 43		ASSEMBLY NO. 1506		MFA-1	
AXIAL HEIGHT		50.456 IN			
882	877	890	881	882	881
502	906	909	910	910	899
		930	935	938	936
887	912	910	900	903	907
895	915	934	978	1022	1028
897	917	937	983	1032	1053
898	921	942	989	1035	1061
899	923	943	997	1038	1063
900	924	944	1000	1040	1065
901	925	945	1003	1043	1068
902	926	946	1006	1046	1071
903	927	947	1009	1049	1074
904	928	948	1012	1052	1077
905	929	949	1015	1055	1080
906	930	950	1018	1058	1083
907	931	951	1021	1061	1086
908	932	952	1024	1064	1089
909	933	953	1027	1067	1092
910	934	954	1030	1070	1095
911	935	955	1033	1073	1098
912	936	956	1036	1076	1101
913	937	957	1039	1079	1104
914	938	958	1042	1082	1107
915	939	959	1045	1085	1110
916	940	960	1048	1088	1113
917	941	961	1051	1091	1116
918	942	962	1054	1094	1119
919	943	963	1057	1097	1122
920	944	964	1060	1100	1125
921	945	965	1063	1103	1128
922	946	966	1066	1106	1131
923	947	967	1069	1109	1134
924	948	968	1072	1112	1137
925	949	969	1075	1115	1140
926	950	970	1078	1118	1143
927	951	971	1081	1121	1146
928	952	972	1084	1124	1149
929	953	973	1087	1127	1152
930	954	974	1090	1130	1155
931	955	975	1093	1133	1158
932	956	976	1096	1136	1161
933	957	977	1099	1139	1164
934	958	978	1102	1142	1167
935	959	979	1105	1145	1170
936	960	980	1108	1148	1173
937	961	981	1111	1151	1176
938	962	982	1114	1154	1179
939	963	983	1117	1157	1182
940	964	984	1120	1160	1185
941	965	985	1123	1163	1188
942	966	986	1126	1166	1191
943	967	987	1129	1169	1194
944	968	988	1132	1172	1197
945	969	989	1135	1175	1200
946	970	990	1138	1178	1203
947	971	991	1141	1181	1206
948	972	992	1144	1184	1209
949	973	993	1147	1187	1212
950	974	994	1150	1190	1215
951	975	995	1153	1193	1218
952	976	996	1156	1196	1221
953	977	997	1159	1199	1224
954	978	998	116		

TEMPERATURE MAP FOR BUNDLE	52	ASSEMBLY NO. 2507				MFA-2			
AXIAL HEIGHT	50.496 IN								
	898	922	922	921	919	916	913	909	898
	938	952	952	950	947	942	938	933	927
	* 975	981	981	978	973	968	962	957	955 *
	906	942 *	977	1021	1053	1058	1054	1049	1042
	509	946 *	982	1039	1091	1105	1103	1097	1082
	912	950 *	988	1047	1104	1122	1122	1116	1110
	915	957 *	997	1054	1112	1132	1126	1119	1112
	915	958 *	999	1053	1113	1134	1135	1129	1122
	914	956 *	997	1028	1105	1134	1137	1132	1124
	923	958 *	992	1036	1105	1133	1136	1133	1123
	924	960 *	996	1050	1110	1131	1132	1126	1119
	924	962 *	996	1053	1108	1126	1127	1121	1114
	924	962 *	1000	1051	1103	1121	1121	1116	1107
	922	961 *	993	1047	1097	1113	1113	1108	1102
	920	959 *	997	1041	1083	1095	1094	1089	1084
	916	954 *	991	1023	1047	1051	1049	1046	1040
	918								
	952								
	918								
	946								
	946								
	944								
	942								
	939								
	935								
	929								
	910								

 

Table B10B.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 108

TEMPERATURE MAP FOR BUNDLE 43		ASSEMBLY NO. 1506		MFA-1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
AXIAL HEIGHT		92.000 IN		856																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
926	929	931	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580	1581	1582	1583	1584	1585	1586	1587	1588	1589	1590	1591	1592	1593	1594	1595	1596	1597	1598	1599	1600	1601	1602	1603	1604	1605	1606	1607	1608	1609	1610	1611	1612	1613	1614	1615	1616	1617	1618	1619	1620	1621	1622	1623	1624	1625	1626	1627	1628	1629	1630	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640	1641	1642	1643	1644	1645	1646	1647	1648	1649	1650	1651	1652	1653	1654	1655	1656	1657	1658	1659	1660	1661	1662	1663	1664	1665	1666	1667	1668	1669	1670	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680	1681	1682	1683	1684	1685	1686	1687	1688	1689	1690	1691	1692	1693	1694	1695	1696	1697	1698	1699	1700	1701	1702	1703	1704	1705	1706	1707	1708	1709	1710	1711	1712	1713	1714	1715	1716	1717	1718	1719	1720	1721	1722	1723	1724	1725	1726	1727	1728	1729	1730	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753	1754	1755	1756	1757	1758	1759	1760	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770	1771	1772	1773	1774	1775	1776	1777	1778	1779	1780	1781	1782	1783	1784	1785	1786	1787	1788	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811	1812	1813	1814	1815	1816	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	

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Table E10B.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 10B

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR	
1506	4.147E-02	3.600E+00	3.064E-02	3.672E+00	
1404	9.507E-02	4.277E+00	6.009E-02	4.432E+00	
1405	0.000E+00	6.248E+00	0.000E+00	6.248E+00	
1505	7.608E-03	4.130E+00	6.111E-03	4.143E+00	
1507	1.043E-02	3.040E+00	8.763E-03	3.060E+00	
1606	7.433E-03	3.351E+00	6.214E-03	3.365E+00	
1607	9.673E-03	2.711E+00	8.021E-03	2.729E+00	
2507	4.353E-02	3.746E+00	3.353E-02	3.823E+00	
2405	1.103E-02	3.904E+00	9.356E-03	3.925E+00	
2506	7.814E-03	4.175E+00	6.790E-03	4.190E+00	
2508	1.258E-02	4.150E+00	1.046E-02	4.173E+00	
2607	8.646E-03	3.251E+00	7.244E-03	3.267E+00	
2608	6.043E-03	3.165E+00	5.465E-03	3.176E+00	
2609	6.872E-03	3.982E+00	6.211E-03	3.995E+00	

Table E10B.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 10B

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.848E+15	1.870E+15
MFA-2	2507	2.948E+15	1.888E+15

Table E10B.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 10B

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6556E-02	1.3311E-02	0.0000E+00
-92.78	5.7032E-02	2.5707E-02	0.0000E+00
-87.78	9.1393E-02	4.1152E-02	0.0000E+00
-82.78	1.3221E-01	6.1421E-02	0.0000E+00
-77.78	1.8205E-01	8.8716E-02	0.0000E+00
-72.15	2.3834E-01	1.2408E-01	0.0000E+00
-65.90	2.9425E-01	1.6878E-01	0.0000E+00
-60.35	3.5314E-01	2.2955E-01	4.8073E-02
-55.49	4.3135E-01	3.1083E-01	5.8282E-02
-50.62	5.2237E-01	4.1682E-01	7.3766E-02
-47.17	5.9540E-01	5.1685E-01	9.1281E-02
-43.58	6.7219E-01	6.3005E-01	7.1728E-01
-38.45	7.8345E-01	7.6728E-01	8.0557E-01
-33.32	8.8740E-01	8.8458E-01	9.0324E-01
-28.20	9.7932E-01	9.8288E-01	9.7144E-01
-23.07	1.0577E+00	1.0647E+00	1.0477E+00
-17.94	1.1211E+00	1.1297E+00	1.1097E+00
-12.82	1.1687E+00	1.1777E+00	1.1434E+00
-7.69	1.2005E+00	1.2098E+00	1.1741E+00
-2.56	1.2160E+00	1.2257E+00	1.1892E+00
2.56	1.2150E+00	1.2251E+00	1.1920E+00
7.69	1.1973E+00	1.2078E+00	1.1747E+00
12.82	1.1627E+00	1.1735E+00	1.1409E+00
17.94	1.1114E+00	1.1225E+00	1.1093E+00
23.07	1.0427E+00	1.0526E+00	1.0414E+00
28.20	9.5759E-01	9.6441E-01	9.5755E-01
33.32	8.5765E-01	8.5853E-01	8.8248E-01
38.45	7.4477E-01	7.3329E-01	7.7260E-01
43.58	6.2448E-01	5.8979E-01	6.6739E-01
47.17	5.4275E-01	4.7724E-01	7.4707E-02
50.62	4.6655E-01	3.7967E-01	5.7303E-02
55.49	3.7180E-01	2.7652E-01	4.1724E-02
60.35	2.8787E-01	1.9594E-01	3.0995E-02
64.98	2.3396E-01	1.4764E-01	0.0000E+00
69.39	2.0126E-01	1.2142E-01	0.0000E+00
76.46	1.5393E-01	8.6116E-02	0.0000E+00
86.80	1.0102E-01	5.1935E-02	0.0000E+00
98.14	5.8524E-02	2.8396E-02	0.0000E+00
110.00	2.5111E-02	1.2728E-02	0.0000E+00

Table E10B.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 10B

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.4343E-02	1.2478E-02	0.0000E+00
-92.78	5.2264E-02	2.4073E-02	0.0000E+00
-87.78	8.3781E-02	3.8498E-02	0.0000E+00
-82.78	1.2141E-01	5.7431E-02	0.0000E+00
-77.78	1.6797E-01	8.3004E-02	0.0000E+00
-72.15	2.2192E-01	1.1645E-01	0.0000E+00
-65.90	2.7786E-01	1.5972E-01	0.0000E+00
-60.35	3.3789E-01	2.1907E-01	4.8702E-02
-55.49	4.1625E-01	2.9863E-01	5.9101E-02
-50.62	5.0746E-01	4.0350E-01	7.4249E-02
-47.17	5.8144E-01	5.0374E-01	9.1260E-02
-43.58	6.5967E-01	6.1810E-01	7.1220E-01
-38.45	7.7387E-01	7.5769E-01	7.9880E-01
-33.32	8.8079E-01	8.7784E-01	8.9793E-01
-28.20	9.7550E-01	9.7917E-01	9.6699E-01
-23.07	1.0566E+00	1.0639E+00	1.0456E+00
-17.94	1.1226E+00	1.1316E+00	1.1101E+00
-12.82	1.1723E+00	1.1817E+00	1.1448E+00
-7.69	1.2055E+00	1.2151E+00	1.1770E+00
-2.56	1.2216E+00	1.2316E+00	1.1926E+00
2.56	1.2204E+00	1.2307E+00	1.1948E+00
7.69	1.2018E+00	1.2125E+00	1.1766E+00
12.82	1.1661E+00	1.1769E+00	1.1419E+00
17.94	1.1136E+00	1.1243E+00	1.1097E+00
23.07	1.0439E+00	1.0532E+00	1.0409E+00
28.20	9.5798E-01	9.6416E-01	9.5666E-01
33.32	8.5773E-01	8.5803E-01	8.8274E-01
38.45	7.4497E-01	7.3319E-01	7.7482E-01
43.58	6.2503E-01	5.9026E-01	6.7578E-01
47.17	5.4250E-01	4.7582E-01	7.7442E-02
50.62	4.6424E-01	3.7539E-01	5.9987E-02
55.49	3.6663E-01	2.6980E-01	4.4168E-02
60.35	2.8101E-01	1.8885E-01	3.3072E-02
64.98	2.2784E-01	1.4187E-01	0.0000E+00
69.39	1.9574E-01	1.1675E-01	0.0000E+00
76.46	1.4946E-01	8.2926E-02	0.0000E+00
86.80	9.7887E-02	4.9962E-02	0.0000E+00
98.14	5.6532E-02	2.7207E-02	0.0000E+00
110.00	2.3989E-02	1.2054E-02	0.0000E+00

Table E10B.5. Fission Power Distribution by Pin in MFA-1 at EOC 10B

CORE POSITION 1506

[illegible]

Table E10B.6. Fission Power Distribution by Pin in MFA-2 at EOC 10B

CORE POSITION 2507

	1.081	1.064	1.048	1.030	1.013	0.995	0.976	0.958						
	1.087	1.071	1.055	1.038	1.020	1.003	0.985	0.967	0.948					
	1.092	1.077	1.061	1.044	1.028	1.010	0.993	0.975	0.956	0.938				
	1.097	1.082	1.066	1.050	1.034	1.017	1.000	0.982	0.964	0.946	0.928			
	1.101	1.087	1.071	1.056	1.040	1.023	1.006	0.989	0.971	0.953	0.935	0.917		
	1.105	1.091	1.076	1.060	1.045	1.028	1.012	0.995	0.978	0.960	0.942	0.924	0.906	
	1.108	1.094	1.080	1.065	1.049	1.033	1.017	1.000	0.983	0.966	0.948	0.930	0.912	0.894
1.111	1.097	1.083	1.068	1.053	1.038	1.022	1.005	0.988	0.971	0.954	0.936	0.918	0.900	0.882
	1.100	1.086	1.071	1.057	1.041	1.025	1.009	0.993	0.976	0.959	0.941	0.924	0.906	0.888
	1.088	1.074	1.059	1.044	1.029	1.013	0.997	0.980	0.963	0.946	0.928	0.911	0.893	
	1.076	1.062	1.047	1.032	1.016	1.000	0.984	0.967	0.950	0.933	0.915	0.897		
	1.064	1.049	1.034	1.019	1.003	0.987	0.970	0.954	0.936	0.919	0.901			
	1.051	1.036	1.021	1.006	0.990	0.973	0.957	0.940	0.922	0.905				
	1.038	1.023	1.008	0.992	0.976	0.959	0.943	0.926	0.908					
	1.024	1.009	0.994	0.978	0.962	0.945	0.928	0.911						

Table E10B.7. Fast Flux Distribution by Pin in MFA-1 at EOC 10B

CORE POSITION 1506

0.875	0.880	0.884	0.888	0.891	0.894	0.896	0.897
0.891	0.896	0.900	0.904	0.908	0.911	0.914	0.916
0.905	0.911	0.916	0.920	0.924	0.928	0.931	0.933
0.920	0.925	0.930	0.935	0.939	0.943	0.947	0.950
0.933	0.939	0.944	0.949	0.954	0.958	0.962	0.965
0.946	0.952	0.957	0.963	0.968	0.972	0.976	0.980
0.957	0.964	0.970	0.975	0.981	0.985	0.990	0.994
0.968	0.975	0.981	0.987	0.993	0.998	1.002	1.007
0.985	0.992	0.998	1.004	1.009	1.014	1.019	1.023
1.002	1.008	1.014	1.020	1.025	1.030	1.035	1.040
1.017	1.023	1.029	1.035	1.040	1.045	1.050	1.055
1.032	1.038	1.044	1.050	1.055	1.060	1.065	1.070
1.046	1.052	1.058	1.064	1.069	1.074	1.080	1.085
1.060	1.066	1.071	1.077	1.083	1.088	1.093	1.098
1.072	1.078	1.084	1.090	1.096	1.101	1.107	1.112

Table E10B.8. Fast Flux Distribution by Pin in MFA-2 at EOC 10B

CORE POSITION 2507

	1.080	1.064	1.048	1.031	1.013	0.995	0.975	0.955						
	1.086	1.071	1.055	1.039	1.022	1.004	0.985	0.965	0.945					
	1.092	1.077	1.062	1.046	1.029	1.012	0.993	0.974	0.954	0.934				
	1.097	1.083	1.068	1.053	1.036	1.019	1.001	0.982	0.963	0.943	0.922			
	1.102	1.088	1.074	1.058	1.042	1.026	1.008	0.990	0.971	0.951	0.931	0.910		
	1.107	1.093	1.079	1.064	1.048	1.031	1.014	0.996	0.978	0.959	0.939	0.918	0.897	
	1.111	1.097	1.083	1.068	1.053	1.037	1.020	1.002	0.984	0.965	0.946	0.926	0.905	0.883
1.114	1.101	1.087	1.072	1.057	1.041	1.025	1.008	0.990	0.971	0.952	0.932	0.912	0.891	0.869
	1.104	1.090	1.076	1.061	1.046	1.029	1.012	0.995	0.977	0.958	0.938	0.918	0.897	0.876
	1.093	1.079	1.064	1.049	1.033	1.017	0.999	0.981	0.963	0.944	0.924	0.903	0.882	
	1.082	1.067	1.052	1.036	1.020	1.003	0.985	0.967	0.948	0.929	0.909	0.888		
	1.069	1.054	1.039	1.023	1.006	0.989	0.971	0.952	0.933	0.913	0.893			
	1.056	1.041	1.025	1.009	0.992	0.974	0.956	0.937	0.917	0.897				
	1.042	1.027	1.010	0.994	0.976	0.958	0.939	0.920	0.900					
	1.028	1.012	0.995	0.978	0.960	0.942	0.923	0.903						

Table E10B.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 10B

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.9156E+15	2.0498E+15
SE	1.6949E+15	2.1040E+15
SW	1.6100E+15	1.9269E+15
W	1.7782E+15	1.6837E+15
NW	2.0340E+15	1.6263E+15
NE	2.0627E+15	1.8024E+15

Table E10B.10. Assembly Outlet Temperatures and
Flow Rates at EOC 10B

CORE POS.	OUTLET TEMP. (DEG F)		FLOW RATE (LB/H)
	MEASURED	CALCULATED	
1506	1016	1019	115440
1404	903	897	228160
1405	1022	1023	188170
1505	902	893	209040
1507	861	842	209040
1606	894	892	171430
1607	866	855	171430
2507	1024	1027	115440
2405	889	881	209060
2506	904	892	209040
2508	909	899	209040
2607	901	889	164410
2608	886	883	171430
2609	937	943	164410

Assembly flows are based on a calculated core pressure drop of 111.5 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E108.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 108

TEMPERATURE MAP FOR BLADE 43	ASSEMBLY	NO. 1506	MFA-1	
AXIAL HEIGHT 44.271 IN				
860	865	866	869	873
867	892	895	896	895
913	919	921	921	920
915	916	917	915	916
880	898	915	966	976
883	901	918	979	1024
885	904	922	984	1053
886	906	925	987	1036
867	908	928	990	1039
886	908	930	990	1041
884	907	928	975	1037
881	908	924	976	1030
884	907	929	963	1044
867	910	932	999	1053
884	914	937	1003	1054
881	916	941	1007	1061
881	918	946	1008	1068
880	917	943	997	1037
877	911	915	919	921
877	883	886	887	888
916				

Table E108.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 108

TEMPERATURE MAP FOR BUNDLE		ASSEMBLY NO. 2587		MFA-2	
AXIAL HEIGHT		44.271 IN			
878	879	880	881	882	883
913	927	928	926	922	919
914	910	904	942	955	955
952	947	942	937	932	929
913	924	921	912	905	908
885	918	951	1013	1046	1048
1044	1039	1035	1022	988	935
914	894	1049	1077	1079	1074
1069	1063	1051	1048	888	922
954	1030	1080	1089	1086	1081
1075	1067	1049	998	935	916
896	1059	1095	1099	1095	1080
1083	1076	1061	1021	890	926
961	1036	1090	1102	1100	1094
1088	1081	1072	1051	996	932
915	896	1063	1100	1106	1101
1095	1089	1082	1075	1059	1012
892	925	966	1040	1094	1107
1105	1098	1092	1086	1079	1069
1047	992	929	912	895	1067
1104	1109	1105	1090	1051	1005
1070	1054	1013	993	932	969
1042	1097	1110	1107	1101	1094
1087	1081	1074	1065	1042	988
925	909	892	1067	1106	1112
1103	1108	1103	1096	1080	1077
1076	1060	1047	992	929	912
895	885	1063	1106	1114	1110
1103	1096	1080	1062	1035	1019
1061	1045	999	970	1025	1094
1113	1112	1106	1099	1092	1085
1078	1072	1065	1054	1028	969
919	903	886	880	921	962
964	1027	1093	1112	1112	1105
1098	1091	1084	1077	1071	1064
1054	1028	971	925	892	879
1061	1104	1112	1108	1101	1094
1087	1080	1074	1068	1059	1042
1000	950	935	968	1039	1086
1109	1107	1100	1093	1086	1080
1074	1067	1057	1036	984	930
967	883	1065	1102	1108	1103
1097	1090	1083	1076	1070	1062
1047	1008	901	936	970	1033
1042	1036	1029	1022	1016	1010
1004	998	992	986	980	974
968	962	956	950	944	938
932	926	920	914	908	902
896	890	884	878	872	866
860	854	848	842	836	830
824	818	812	806	800	794
758	752	746	740	734	728
702	696	690	684	678	672
626	620	614	608	602	596
560	554	548	542	536	530
504	498	492	486	480	474
418	412	406	400	394	388
352	346	340	334	328	322
286	280	274	268	262	256
190	184	178	172	166	160
104	98	92	86	80	74
18	12	6	0	-6	-12

TEMPERATURE MAP FOR BUNDLE 43	ASSEMBLY NO. 1504	MFA-1
AXIAL HEIGHT 50.4% IN		
271	875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890	
895	903 906 907 907 906 905 904 895	
	926 931 934 934 933 932 930 929 931	
891 504	927 926 926 927 927 927 925 928 926 928 903 867	
854 512	930 975 1019 1034 1037 1038 1037 1034 1020 962 944 908 871	
895 915	934 981 1029 1048 1054 1055 1055 1054 1050 1032 988 947 911 874	
857 517	926 984 1034 1054 1060 1061 1062 1062 1062 1057 1038 992 950 914 877	
897 919	941 987 1036 1057 1064 1065 1066 1067 1067 1067 1062 1042 995 951 916 879	
897 920	942 986 1038 1068 1067 1069 1070 1070 1071 1072 1072 1066 1045 995 953 917 881	
895 918	941 974 1032 1060 1059 1072 1073 1074 1075 1076 1076 1076 1068 1042 988 955 920 883	
882 909	936 1003 1050 1069 1074 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074 1075 1076 1077 1078 1079 1080 1080 1077 1060 1018	
852 515	927 974 1033 1062 1072 1074 1075 1076 1077 1078 1078 1078 1071 1045 993 967 945 962	
895 918	941 985 1045 1069 1074	

N

Table E10B.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 10B

TEMPERATURE MAP FOR EUABLE AXIAL HEIGHT 50.496 IN	52	ASSEMBLY NO. 2507 MFA-2									
	889	911	911	910	909	908	902	899	889		
	925	939	940	938	934	930	926	922	916		
		961	967	968	964	960	954	949	944	942	
	894	920	963	1007	1038	1042	1038	1033	1026	1014	983
		969	934	968	1024	1073	1086	1084	1079	1073	1064
	901	938	973	1031	1085	1102	1102	1096	1090	1083	1072
	903	941	972	1035	1090	1108	1108	1102	1096	1089	1082
	904	944	982	1038	1093	1111	1111	1105	1099	1092	1085
		904	945	984	1037	1094	1114	1114	1108	1101	1094
	903	943	982	1023	1057	1113	1216	1111	1103	1096	1089
	911	946	977	1021	1084	1112	1115	1110	1103	1096	1089
	912	947	981	1024	1091	1110	1111	1105	1098	1091	1084
				1058	1100	1110	1107	1101	1094	1087	1081
	913	948	983	1034	1088	1104	1106	1100	1093	1087	1080
				1057	1096	1105	1102	1096	1090	1083	1077
	912	949	984	1034	1088	1100	1100	1094	1087	1081	1074
				1053	1091	1099	1097	1091	1085	1078	1072
	910	946	982	1031	1085	1093	1093	1087	1081	1074	1068
				1048	1083	1090	1087	1081	1074	1068	1061
	909	945	982	1022	1068	1076	1075	1069	1063	1056	1050
				1037	1062	1064	1063	1056	1052	1045	1038
	906	941	976	1027	1031	1036	1033	1025	1024	1012	1002
				1004	1013	1014	1012	1008	1002	994	
				938	951	951	951	949	947	944	938
	906			933	933	931	929	926	922	917	899

N

Table E10B.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 10B

TEMPERATURE MAP FOR BUNDLE 43 ASSEMBLY NO. 1506 MFA-1		AVIAL HEIGHT 92.000 IN.	
924	926	928	930
931	933	935	937
938	939	940	941
942	943	944	945
946	947	948	949
950	951	952	953
954	955	956	957
958	959	960	961
962	963	964	965
968	969	970	971
974	975	976	977
978	979	980	981
984	985	986	987
988	989	990	991
994	995	996	997
998	999	1000	1001
1004	1005	1006	1007
1008	1009	1010	1011
1014	1015	1016	1017
1018	1019	1020	1021
1024	1025	1026	1027
1028	1029	1030	1031
1034	1035	1036	1037
1038	1039	1040	1041
1044	1045	1046	1047
1048	1049	1050	1051
1054	1055	1056	1057
1058	1059	1060	1061
1064	1065	1066	1067
1068	1069	1070	1071
1074	1075	1076	1077
1078	1079	1080	1081
1084	1085	1086	1087
1088	1089	1090	1091
1094	1095	1096	1097
1098	1099	1100	1101
1104	1105	1106	1107
1108	1109	1110	1111
1114	1115	1116	1117
1118	1119	1120	1121
1124	1125	1126	1127
1128	1129	1130	1131
1134	1135	1136	1137
1138	1139	1140	1141
1144	1145	1146	1147
1148	1149	1150	1151
1154	1155	1156	1157
1158	1159	1160	1161
1164	1165	1166	1167
1168	1169	1170	1171
1174	1175	1176	1177
1178	1179	1180	1181
1184	1185	1186	1187
1188	1189	1190	1191
1194	1195	1196	1197
1198	1199	1200	1201
1204	1205	1206	1207
1208	1209	1210	1211
1214	1215	1216	1217
1218	1219	1220	1221
1224	1225	1226	1227
1228	1229	1230	1231
1234	1235	1236	1237
1238	1239	1240	1241
1244	1245	1246	1247
1248	1249	1250	1251
1254	1255	1256	1257
1258	1259	1260	1261
1264	1265	1266	1267
1268	1269	1270	1271
1274	1275	1276	1277
1278	1279	1280	1281
1284	1285	1286	1287
1288	1289	1290	1291
1294	1295	1296	1297
1298	1299	1300	1301
1304	1305	1306	1307
1308	1309	1310	1311
1314	1315	1316	1317
1318	1319	1320	1321
1324	1325	1326	1327
1328	1329	1330	1331
1334	1335	1336	1337
1338	1339	1340	1341
1344	1345	1346	1347
1348	1349	1350	1351
1354	1355	1356	1357
1358	1359	1360	1361
1364	1365	1366	1367
1368	1369	1370	1371
1374	1375	1376	1377
1378	1379	1380	1381
1384	1385	1386	1387
1388	1389	1390	1391
1394	1395	1396	1397
1398	1399	1400	1401
1404	1405	1406	1407
1408	1409	1410	1411
1414	1415	1416	1417
1418	1419	1420	1421
1424	1425	1426	1427
1428	1429	1430	1431
1434	1435	1436	1437
1438	1439	1440	1441
1444	1445	1446	1447
1448	1449	1450	1451
1454	1455	1456	1457
1458	1459	1460	1461
1464	1465	1466	1467
1468	1469	1470	1471
1474	1475	1476	1477
1478	1479	1480	1481
1484	1485	1486	1487
1488	1489	1490	1491
1494	1495	1496	1497
1498	1499	1500	1501
1504	1505	1506	1507
1508	1509	1510	1511
1514	1515	1516	1517
1518	1519	1520	1521
1524	1525	1526	1527
1528	1529	1530	1531
1534	1535	1536	1537
1538	1539	1540	1541
1544	1545	1546	1547
1548	1549	1550	1551
1554	1555	1556	1557
1558	1559	1560	1561
1564	1565	1566	1567
1568	1569	1570	1571
1574	1575	1576	1577
1578	1579	1580	1581
1584	1585	1586	1587
1588	1589	1590	1591
1594	1595	1596	1597
1598	1599	1600	1601
1604	1605	1606	1607
1608	1609	1610	1611
1614	1615	1616	1617
1618	1619	1620	1621
1624	1625	1626	1627
1628	1629	1630	1631
1634	1635	1636	1637
1638	1639	1640	1641
1644	1645	1646	1647
1648	1649	1650	1651
1654	1655	1656	1657
1658	1659	1660	1661
1664	1665	1666	1667
1668	1669	1670	1671
1674	1675	1676	1677
1678	1679	1680	1681
1684	1685	1686	1687
1688	1689	1690	1691
1694	1695	1696	1697
1698	1699	1700	1701
1704	1705	1706	1707
1708	1709	1710	1711
1714	1715	1716	1717
1718	1719	1720	1721
1724	1725	1726	1727
1728	1729	1730	1731
1734	1735	1736	1737
1738	1739	1740	1741
1744	1745	1746	1747
1748	1749	1750	1751
1754	1755	1756	1757
1758	1759	1760	1761
1764	1765	1766	1767
1768	1769	1770	1771
1774	1775	1776	1777
1778	1779	1780	1781
1784	1785	1786	1787
1788	1789	1790	1791
1794	1795	1796	1797
1798	1799	1800	1801
1804	1805	1806	1807
1808	1809	1810	1811
1814	1815	1816	1817
1818	1819	1820	1821
1824	1825	1826	1827
1828	1829	1830	1831
1834	1835	1836	1837
1838	1839	1840	1841
1844	1845	1846	1847
1848	1849	1850	1851
1854	1855	1856	1857
1858	1859	1860	1861
1864	1865	1866	1867
1868	1869	1870	1871
1874	1875	1876	1877
1878	1879	1880	1881
1884	1885	1886	1887
1888	1889	1890	1891
1894	1895	1896	1897
1898	1899	1900	1901
1904	1905	1906	1907
1908	1909	1910	1911
1914	1915	1916	1917
1918	1919	1920	1921
1924	1925	1926	1927
1928	1929	1930	1931
1934	1935	1936	1937
1938	1939	1940	1941
1944	1945	1946	1947
1948	1949	1950	1951
1954	1955	1956	1957
1958	1959	1960	1961
1964	1965	1966	1967
1968	1969	1970	1971
1974	1975	1976	1977
1978	1979	1980	1981
1984	1985	1986	1987
1988	1989	1990	1991
1994	1995	1996	1997
1998	1999	2000	2001

Table E108.17. Composition of MFA-1 at EOC 10B

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23 SS-316	5.3150E-03 6.4090E-02	5.3150E-03 6.4090E-02
2	-75.28	-62.78	Na-23 SS-316	1.3177E-02 3.4175E-02	1.3177E-02 3.4175E-02
3	-62.78	-46.14	U-235 U-238 Pu-239 Pu-240 FP O-16 Na-23 SS-316	1.4143E-05 7.0573E-03 0.0000E+00 0.0000E+00 0.0000E+00 1.4143E-02 9.7416E-03 1.9073E-02	1.2238E-05 6.9566E-03 8.8941E-05 1.7886E-06 1.1291E-05 1.4143E-02 9.7416E-03 1.9073E-02
4	-46.14	-30.76	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0840E-05 4.4499E-03 1.7520E-03 2.2340E-04 1.9280E-05 4.7430E-06 7.6680E-07 0.0000E+00 1.2670E-02 9.8100E-03 1.8990E-02	9.5078E-06 4.3731E-03 1.6001E-03 2.5209E-04 2.1258E-05 4.9086E-06 1.4957E-06 1.9784E-04 1.2670E-02 9.8100E-03 1.8990E-02
5	-30.76	-15.38	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0840E-05 4.4499E-03 1.7520E-03 2.2340E-04 1.9280E-05 4.7430E-06 7.6680E-07 0.0000E+00 1.2670E-02 9.8100E-03 1.8990E-02	9.2007E-06 4.3525E-03 1.5596E-03 2.5435E-04 2.1405E-05 4.9098E-06 1.4732E-06 2.5693E-04 1.2670E-02 9.8100E-03 1.8990E-02
6	-15.38	0.00	U-235 U-238 Pu-239 Pu-240 Pu-241 Pu-242 Am-241 FP O-16 Na-23 SS-316	1.0840E-05 4.4499E-03 1.7520E-03 2.2340E-04 1.9280E-05 4.7430E-06 7.6680E-07 0.0000E+00 1.2670E-02 9.8100E-03 1.8990E-02	9.0293E-06 4.3414E-03 1.5388E-03 2.5720E-04 2.1727E-05 4.9304E-06 1.4646E-06 2.8557E-04 1.2670E-02 9.8100E-03 1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	9.0781E-06
			U-238	4.4499E-03	4.3446E-03
			Pu-239	1.7520E-03	1.5446E-03
			Pu-240	2.2340E-04	2.5624E-04
			Pu-241	1.9280E-05	2.1618E-05
			Pu-242	4.7430E-06	4.9231E-06
			Am-241	7.6680E-07	1.4670E-06
			FP	0.0000E+00	2.7762E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	9.3414E-06
			U-238	4.4499E-03	4.3613E-03
			Pu-239	1.7520E-03	1.5758E-03
			Pu-240	2.2340E-04	2.5158E-04
			Pu-241	1.9280E-05	2.1101E-05
			Pu-242	4.7430E-06	4.8900E-06
			Am-241	7.6680E-07	1.4800E-06
			FP	0.0000E+00	2.3484E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	9.7206E-06
			U-238	4.4499E-03	4.3858E-03
			Pu-239	1.7520E-03	1.6238E-03
			Pu-240	2.2340E-04	2.4697E-04
			Pu-241	1.9280E-05	2.0681E-05
			Pu-242	4.7430E-06	4.8705E-06
			Am-241	7.6680E-07	1.5038E-06
			FP	0.0000E+00	1.6702E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2827E-05
			U-238	7.0573E-03	6.9864E-03
			Pu-239	0.0000E+00	6.3300E-05
			Pu-240	0.0000E+00	8.2206E-07
			FP	0.0000E+00	7.6817E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10B.18. Composition of MFA-2 at EOC 10B

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.2168E-05
			U-238	7.0573E-03	6.9539E-03
			Pu-239	0.0000E+00	9.1185E-05
			Pu-240	0.0000E+00	1.9680E-06
			FP	0.0000E+00	1.1653E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	8.8595E-06
			U-238	4.4270E-03	4.3471E-03
			Pu-239	1.7483E-03	1.5916E-03
			Pu-240	2.2290E-04	2.5360E-04
			Pu-241	1.9040E-05	2.1302E-05
			Pu-242	4.7330E-06	4.9107E-06
			Am-241	7.5700E-07	1.4735E-06
			FP	0.0000E+00	2.0350E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	8.5513E-06
			U-238	4.4270E-03	4.3247E-03
			Pu-239	1.7483E-03	1.5486E-03
			Pu-240	2.2290E-04	2.5621E-04
			Pu-241	1.9040E-05	2.1487E-05
			Pu-242	4.7330E-06	4.9136E-06
			Am-241	7.5700E-07	1.4501E-06
			FP	0.0000E+00	2.6625E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	8.3739E-06
			U-238	4.4270E-03	4.3124E-03
			Pu-239	1.7483E-03	1.5261E-03
			Pu-240	2.2290E-04	2.5941E-04
			Pu-241	1.9040E-05	2.1865E-05
			Pu-242	4.7330E-06	4.9377E-06
			Am-241	7.5700E-07	1.4404E-06
			FP	0.0000E+00	2.9760E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	8.4177E-06
			U-238	4.4270E-03	4.3155E-03
			Pu-239	1.7483E-03	1.5314E-03
			Pu-240	2.2290E-04	2.5850E-04
			Pu-241	1.9040E-05	2.1756E-05
			Pu-242	4.7330E-06	4.9304E-06
			Am-241	7.5700E-07	1.4426E-06
			FP	0.0000E+00	2.9017E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	8.6688E-06
			U-238	4.4270E-03	4.3327E-03
			Pu-239	1.7483E-03	1.5631E-03
			Pu-240	2.2290E-04	2.5373E-04
			Pu-241	1.9040E-05	2.1205E-05
			Pu-242	4.7330E-06	4.8955E-06
			Am-241	7.5700E-07	1.4559E-06
			FP	0.0000E+00	2.4655E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	9.0368E-06
			U-238	4.4270E-03	4.3583E-03
			Pu-239	1.7483E-03	1.6125E-03
			Pu-240	2.2290E-04	2.4899E-04
			Pu-241	1.9040E-05	2.0764E-05
			Pu-242	4.7330E-06	4.8756E-06
			Am-241	7.5700E-07	1.4806E-06
			FP	0.0000E+00	1.7654E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2691E-05
			U-238	7.0573E-03	6.9803E-03
			Pu-239	0.0000E+00	6.8652E-05
			Pu-240	0.0000E+00	1.0361E-06
			FP	0.0000E+00	8.3704E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.6 Cycle 10C-1

Table B10C-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10C-1

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	4.498E-02	3.489E+00	2.737E-02	3.562E+00
1404	1.255E-02	3.635E+00	8.021E-03	3.655E+00
1405	0.000E+00	6.311E+00	0.000E+00	6.311E+00
1505	1.120E-02	3.173E+00	6.603E-03	3.191E+00
1507	8.006E-03	3.287E+00	5.434E-03	3.301E+00
1606	7.571E-03	3.055E+00	5.076E-03	3.067E+00
1607	9.894E-03	2.860E+00	6.403E-03	2.877E+00
2507	4.934E-02	4.039E+00	3.267E-02	4.121E+00
2405	1.373E-02	4.030E+00	9.583E-03	4.053E+00
2506	9.444E-03	4.689E+00	6.984E-03	4.705E+00
2508	1.408E-02	4.214E+00	8.945E-03	4.237E+00
2607	1.025E-02	3.719E+00	7.530E-03	3.737E+00
2608	6.908E-03	3.439E+00	5.455E-03	3.452E+00
2609	7.564E-03	4.111E+00	5.864E-03	4.125E+00

Table B10C-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10C-1

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-1	1506	2.744E+15	1.784E+15
MFA-2	2507	3.191E+15	2.069E+15

Table B10C-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10C-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8606E-02	1.4407E-02	0.0000E+00
-92.78	6.1416E-02	2.7786E-02	0.0000E+00
-87.78	9.8382E-02	4.4390E-02	0.0000E+00
-82.78	1.4234E-01	6.6089E-02	0.0000E+00
-77.78	1.9634E-01	9.5217E-02	0.0000E+00
-72.15	2.5833E-01	1.3304E-01	0.0000E+00
-65.90	3.2123E-01	1.8130E-01	0.0000E+00
-60.35	3.8673E-01	2.4660E-01	5.4673E-02
-55.49	4.7156E-01	3.3369E-01	6.5758E-02
-50.62	5.6869E-01	4.4784E-01	8.1938E-02
-47.17	6.4592E-01	5.5618E-01	1.0018E-01
-43.58	7.2696E-01	6.7898E-01	7.8500E-01
-38.45	8.4406E-01	8.2512E-01	8.7046E-01
-33.32	9.5155E-01	9.4742E-01	9.6907E-01
-28.20	1.0438E+00	1.0469E+00	1.0352E+00
-23.07	1.1190E+00	1.1261E+00	1.1079E+00
-17.94	1.1754E+00	1.1845E+00	1.1628E+00
-12.82	1.2123E+00	1.2220E+00	1.1853E+00
-7.69	1.2300E+00	1.2401E+00	1.2021E+00
-2.56	1.2288E+00	1.2393E+00	1.2006E+00
2.56	1.2098E+00	1.2207E+00	1.1855E+00
7.69	1.1741E+00	1.1853E+00	1.1505E+00
12.82	1.1233E+00	1.1347E+00	1.1008E+00
17.94	1.0586E+00	1.0700E+00	1.0552E+00
23.07	9.8023E-01	9.9023E-01	9.7760E-01
28.20	8.8952E-01	8.9645E-01	8.8830E-01
33.32	7.8841E-01	7.8965E-01	8.1046E-01
38.45	6.7870E-01	6.6861E-01	7.0456E-01
43.58	5.6547E-01	5.3391E-01	6.0864E-01
47.17	4.9071E-01	4.3019E-01	6.8281E-02
50.62	4.2151E-01	3.4092E-01	5.2626E-02
55.49	3.3610E-01	2.4788E-01	3.8612E-02
60.35	2.6025E-01	1.7585E-01	2.8812E-02
64.98	2.1074E-01	1.3242E-01	0.0000E+00
69.39	1.8030E-01	1.0852E-01	0.0000E+00
76.46	1.3673E-01	7.6438E-02	0.0000E+00
86.80	8.9382E-02	4.5838E-02	0.0000E+00
98.14	5.2058E-02	2.5037E-02	0.0000E+00
110.00	2.2338E-02	1.1174E-02	0.0000E+00

Table B10C-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10C-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5080E-02	1.2786E-02	0.0000E+00
-92.78	5.3820E-02	2.4682E-02	0.0000E+00
-87.78	8.6275E-02	3.9513E-02	0.0000E+00
-82.78	1.2506E-01	5.9032E-02	0.0000E+00
-77.78	1.7307E-01	8.5490E-02	0.0000E+00
-72.15	2.2882E-01	1.2024E-01	0.0000E+00
-65.90	2.8749E-01	1.6568E-01	0.0000E+00
-60.35	3.5187E-01	2.2878E-01	5.0602E-02
-55.49	4.3585E-01	3.1370E-01	6.1927E-02
-50.62	5.3370E-01	4.2560E-01	7.8435E-02
-47.17	6.1299E-01	5.3206E-01	9.6890E-02
-43.58	6.9687E-01	6.5308E-01	7.5043E-01
-38.45	8.1807E-01	8.0069E-01	8.4398E-01
-33.32	9.2992E-01	9.2632E-01	9.4824E-01
-28.20	1.0266E+00	1.0299E+00	1.0184E+00
-23.07	1.1062E+00	1.1132E+00	1.0956E+00
-17.94	1.1670E+00	1.1759E+00	1.1550E+00
-12.82	1.2084E+00	1.2179E+00	1.1810E+00
-7.69	1.2307E+00	1.2405E+00	1.2025E+00
-2.56	1.2342E+00	1.2442E+00	1.2058E+00
2.56	1.2195E+00	1.2298E+00	1.1948E+00
7.69	1.1873E+00	1.1977E+00	1.1634E+00
12.82	1.1388E+00	1.1492E+00	1.1160E+00
17.94	1.0749E+00	1.0853E+00	1.0719E+00
23.07	9.9622E-01	1.0053E+00	9.9407E-01
28.20	9.0423E-01	9.1030E-01	9.0343E-01
33.32	8.0098E-01	8.0159E-01	8.2442E-01
38.45	6.8842E-01	6.7810E-01	7.1545E-01
43.58	5.7169E-01	5.4091E-01	6.1572E-01
47.17	4.9281E-01	4.3411E-01	7.1157E-02
50.62	4.1870E-01	3.4063E-01	5.4589E-02
55.49	3.2779E-01	2.4310E-01	3.9643E-02
60.35	2.4887E-01	1.6878E-01	2.9256E-02
64.98	1.9982E-01	1.2575E-01	0.0000E+00
69.39	1.7076E-01	1.0296E-01	0.0000E+00
76.46	1.2944E-01	7.2517E-02	0.0000E+00
86.80	8.4409E-02	4.3373E-02	0.0000E+00
98.14	4.8815E-02	2.3550E-02	0.0000E+00
110.00	2.0809E-02	1.0444E-02	0.0000E+00

Table B10C-1.5. Fission Power Distribution by Pin in MFA-1 at BOC 10C-1

CORE POSITION 1506

					0.894	0.900	0.906	0.912	0.916	0.921	0.925	0.929								
					0.904	0.911	0.917	0.923	0.928	0.933	0.937	0.941	0.945							
					0.913	0.920	0.927	0.933	0.939	0.945	0.949	0.954	0.957	0.961						
					0.921	0.929	0.937	0.943	0.950	0.956	0.961	0.965	0.970	0.973	0.976					
					0.929	0.938	0.946	0.953	0.960	0.966	0.972	0.977	0.981	0.985	0.988	0.991				
					0.936	0.945	0.954	0.962	0.969	0.976	0.982	0.987	0.992	0.996	1.000	1.003	1.005			
					0.943	0.953	0.962	0.970	0.978	0.985	0.992	0.997	1.002	1.007	1.010	1.014	1.016	1.018		
					0.949	0.959	0.969	0.978	0.986	0.994	1.001	1.007	1.012	1.017	1.021	1.024	1.027	1.029	1.030	
					0.966	0.976	0.985	0.994	1.002	1.009	1.016	1.022	1.027	1.031	1.034	1.037	1.039	1.040		
					0.982	0.992	1.001	1.010	1.017	1.024	1.030	1.036	1.040	1.044	1.047	1.049	1.050			
					0.998	1.008	1.017	1.025	1.032	1.039	1.044	1.049	1.053	1.056	1.058	1.060				
					1.014	1.023	1.032	1.040	1.047	1.053	1.058	1.062	1.065	1.067	1.069					
					1.029	1.038	1.047	1.054	1.060	1.066	1.070	1.074	1.076	1.078						
					1.044	1.053	1.061	1.068	1.073	1.078	1.082	1.085	1.087							
					1.059	1.067	1.074	1.081	1.086	1.090	1.093	1.096								

Table B10C-1.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10C-1

CORE POSITION 1506

[illegible]

Table B10C-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10C-1

CORE POSITION 2507

[illegible]

Table B10C-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10C-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.7529E+15	2.1736E+15
SE	1.5775E+15	2.2992E+15
SW	1.5547E+15	2.1863E+15
W	1.7513E+15	1.9090E+15
NW	1.9921E+15	1.7845E+15
NE	1.9481E+15	1.9208E+15

Table B10C-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 10C-1

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE (LB/H)
	(DEG F)	
1506	1004	114180
1404	874	206750
1405	1026	186110
1505	855	196600
1507	863	196600
1606	873	169550
1607	870	162600
2507	1064	114180
2405	900	206770
2506	930	206750
2508	907	196600
2607	931	162600
2608	906	169550
2609	957	162600

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.67E+06 lb/hr.

Table B10C-1.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10C-1

[illegible]

Table B10C-1.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 10C-1

[illegible]

Table B10C-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10C-1

TEMPERATURE MAP FOR BLUICLE 43		ASSEMBLY NO. 1506 MFA-1									
AXIAL HEIGHT		867	876	881	883	883	883	883	883	883	883
867	867	867	876	881	883	883	883	883	883	883	883
868	868	868	877	882	884	884	884	884	884	884	884
869	869	869	878	883	885	885	885	885	885	885	885
870	870	870	879	884	886	886	886	886	886	886	886
871	871	871	880	885	887	887	887	887	887	887	887
872	872	872	881	886	888	888	888	888	888	888	888
873	873	873	882	887	889	889	889	889	889	889	889
874	874	874	883	888	890	890	890	890	890	890	890
875	875	875	884	889	891	891	891	891	891	891	891
876	876	876	885	890	892	892	892	892	892	892	892
877	877	877	886	891	893	893	893	893	893	893	893
878	878	878	887	892	894	894	894	894	894	894	894
879	879	879	888	893	895	895	895	895	895	895	895
880	880	880	889	894	896	896	896	896	896	896	896
881	881	881	890	895	897	897	897	897	897	897	897
882	882	882	891	896	898	898	898	898	898	898	898
883	883	883	892	897	899	899	899	899	899	899	899
884	884	884	893	898	900	900	900	900	900	900	900
885	885	885	894	899	901	901	901	901	901	901	901
886	886	886	895	900	902	902	902	902	902	902	902
887	887	887	896	901	903	903	903	903	903	903	903
888	888	888	897	902	904	904	904	904	904	904	904
889	889	889	898	903	905	905	905	905	905	905	905
890	890	890	899	904	906	906	906	906	906	906	906
891	891	891	900	905	907	907	907	907	907	907	907
892	892	892	901	906	908	908	908	908	908	908	908
893	893	893	902	907	909	909	909	909	909	909	909
894	894	894	903	908	910	910	910	910	910	910	910
895	895	895	904	909	911	911	911	911	911	911	911
896	896	896	905	910	912	912	912	912	912	912	912
897	897	897	906	911	913	913	913	913	913	913	913
898	898	898	907	912	914	914	914	914	914	914	914
899	899	899	908	913	915	915	915	915	915	915	915
900	900	900	909	914	916	916	916	916	916	916	916
901	901	901	910	915	917	917	917	917	917	917	917
902	902	902	911	916	918	918	918	918	918	918	918
903	903	903	912	917	919	919	919	919	919	919	919
904	904	904	913	918	920	920	920	920	920	920	920
905	905	905	914	919	921	921	921	921	921	921	921
906	906	906	915	920	922	922	922	922	922	922	922
907	907	907	916	921	923	923	923	923	923	923	923
908	908	908	917	922	924	924	924	924	924	924	924
909	909	909	918	923	925	925	925	925	925	925	925
910	910	910	919	924	926	926	926	926	926	926	926
911	911	911	920	925	927	927	927	927	927	927	927
912	912	912	921	926	928	928	928	928	928	928	928
913	913	913	922	927	929	929	929	929	929	929	929
914	914	914	923	928	930	930	930	930	930	930	930
915	915	915	924	929	931	931	931	931	931	931	931
916	916	916	925	930	932	932	932	932	932	932	932
917	917	917	926	931	933	933	933	933	933	933	933
918	918	918	927	932	934	934	934	934	934	934	934
919	919	919	928	933	935	935	935	935	935	935	935
920	920	920	929	934	936	936	936	936	936	936	936
921	921	921	930	935	937	937	937	937	937	937	937
922	922	922	931	936	938	938	938	938	938	938	938
923	923	923	932	937	939	939	939	939	939	939	939
924	924	924	933	938	940	940	940	940	940	940	940
925	925	925	934	939	941	941	941	941	941	941	941
926	926	926	935	940	942	942	942	942	942	942	942
927	927	927	936	941	943	943	943	943	943	943	943
928	928	928	937	942	944	944	944	944	944	944	944
929	929	929	938	943	945	945	945	945	945	945	945
930	930	930	939	944	946	946	946	946	946	946	946
931	931	931	940	945	947	947	947	947	947	947	947
932	932	932	941	946	948	948	948	948	948	948	948
933	933	933	942	947	949	949	949	949	949	949	949
934	934	934	943	948	950	950	950	950	950	950	950
935	935	935	944	949	951	951	951	951	951	951	951
936	936	936	945	950	952	952	952	952	952	952	952
937	937	937	946	951	953	953	953	953	953	953	953
938	938	938	947	952	954	954	954	954	954	954	954
939	939	939	948	953	955	955	955	955	955	955	955
940	940	940	949	954	956	956	956	956	956	956	956
941	941	941	950	955	957	957	957	957	957	957	957
942	942	942	951	956	958	958	958	958	958	958	958
943	943	943	952	957	959	959	959	959	959	959	959
944	944	944	953	958	960	960	960	960	960	960	960
945	945	945	954	959	961	961	961	961	961	961	961
946	946	946	955	960	962	962	962	962	962	962	962
947	947	947	956	961	963	963	963	963	963	963	963
948	948	948	957	962	964	964	964	964	964	964	964
949	949	949	958	963	965	965	965	965	965	965	965
950	950	950	959	964	966	966	966	966	966	966	966
951	951	951	960	965	967	967	967	967	967	967	967
952	952	952	961	966	968	968	968	968	968	968	968
953	953	953	962	967	969	969	969	969	969	969	969
954	954	954	963	968	970	970	970	970	970	970	970
955	955	955	964	969	971	971	971	971	971	971	971
956	956	956	965	970	972	972	972	972	972	972	972
957	957	957	966	971	973	973	973	973	973	973	973
958	958	958	967	972	974	974	974	974	974	974	974
959	959	959	968	973	975	975	975	975	975	975	975
960	960	960	969	974	976	976	976	976	976	976	976
961	961	961	970	975	977	977	977	977	977	977	977
962	962	962	971	976	978	978	978	978	978	978	978
963	963	963	972	977	979	979	979	979	979	979	979
964	964	964	973	978	980	980	980	980	980	980	980
965	965	965	974	979	981	981	981	981	981	981	981
966	966	966	975	980	982	982	982	982	982	982	982
967	967	967	976	981	983	983	983	983	983	983	983
968	968	968	977	982	984	984	984	984	984	984	984
969	969	969	978	983	985	985	985	985	985	985	985
970	970	970	979	984	986	986	986	986	986	986	986
971	971	971	980	985	987	987	987	987	987	987	987
972	972	972	981	986	988	988	988	988	988	988	988
973	973	973	982	987	989	989	989	989	989	989	989
974	974	974	983	988	990	990	990	990	990	990	990
975	975	975	984	989	991	991	991	991	991	991	991
976	976	976	985	990	992	992	992	992	992	992	992
977	977	977	986	991	993	993	993	993	993	993	993
978	978	978	987	992	994	994	994	994	994	994	994
979	979	979	988	993	995	995	995	995	995	995	995
980	980	980	989	994	996	996	996	996	996	996	996
981	981	981	990	995	997	997	997	997	997	997	997
982	982	982	991	996	998	998	998	998	998	998	998
983	983	983	992	997	999	999	999	999	999	999	999
984	984	984	993	998	1000</						

Table B10C-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 10C-1

TEMPERATURE VAPOR FOR BUNDLE #2 AXIAL HEIGHT 50+806 IN	ASSEMBLY NO. 2507	MFA-2
910	935 936 936 936 932 939 925	917
951	966 968 964 963 959 955 951	946
990	997 998 995 991 986 980 975 973	
1035	1051 1051 1048 1043 1035 1017	
514 524	931 1036 1070 1076 1074 1069 1063 1051 1017 978	956 934
1071	1106 1112 1105 1104 1099 1085 1068	
918 957	995 1053 1107 1123 1122 1118 1115 1104 1083 1039 978	958 936
1082	1154 1136 1135 1130 1125 1117 1099 1052	
920 940	1000 1059 1118 1138 1140 1136 1130 1124 1114 1097 1027 975	956 936
1064 1112	1144 1142 1137 1132 1126 1117 1097 1040	
921 963	1004 1063 1122 1143 1140 1135 1129 1123 1111 1083 1023 970	953 935
1008 1134	1146 1145 1139 1134 1128 1122 1112 1052 1043	
922 965	1307 1064 1123 1145 1146 1142 1136 1130 1124 1117 1105 1077 1017 964	949 932
1028 1135	1147 1146 1140 1134 1129 1123 1117 1113 1107 1095 1036	
921 965	1002 1123 1145 1147 1142 1136 1130 1124 1118 1111 1099 1070 1010 961	945 928
1079 1131	1147 1146 1141 1135 1128 1122 1116 1110 1100 1076 1024	
519 963	1045 1045 1142 1143 1137 1131 1124 1118 1113 1105 1091 1067 994	952 942 925
905 982	993	958 933 907
925 963	992	958 944 938 912
1076 1128	1144 1143 1138 1131 1125 1119 1113 1107 1097 1074 1025	
927 965	1001 1056 1117 1139 1141 1136 1130 1124 1118 1112 1105 1093 1066 1010 968	942 915
1043 1127	1139 1137 1132 1126 1120 1114 1108 1099 1079 1033	
926 965	1002 1058 1114 1134 1135 1130 1124 1118 1113 1104 1094 1068 1014 945	944 917
1080 1122	1133 1132 1126 1121 1115 1109 1100 1080 1036	
925 945	1004 1109 1127 1139 1142 1135 1129 1123 1117 1111 1104 1090 1056	945 919
1076 1114	1137 1135 1130 1125 1119 1113 1107 1096 1069 1015 970	945 919
1076 1114	1137 1135 1130 1125 1119 1113 1107 1096 1069 1015 970	945 919
924 944	1003 1052 1107 1112 1120 1116 1111 1105 1094 1069 1014 949	945 920
1078 1107	1116 1114 1109 1104 1097 1074 1036	
521 561	1000 1044 1098 1100 1100 1096 1091 1043 1063 1014 969	945 921
1057 1034	1079 1043 1078 1065 1010	
514 964	994 1024 1041 1052 1074 1257 1047 1016 1007 964	946 932
1022 1033	1016 1032 1030 1024 1007	
907 085	996 997 997 936 924 978 972	
951	967 947 947 964 964 961 956	944
919	948 948 947 945 942 932 933	916

Table B10C-1.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 10C-1

TEMPERATURE MAP FOR BUACLE 43		ASSEMBLY NO. 1506		MFA-1	
AXIAL HEIGHT		IN		R92	
897	900	902	904	906	908
517	925	927	928	929	931
943	946	948	951	952	953
954	961	965	967	967	966
972	974	975	976	977	978
982	983	984	985	986	987
988	989	990	991	992	993
994	995	996	997	998	999
1000	1001	1002	1003	1004	1005
1006	1007	1008	1009	1010	1011
1012	1013	1014	1015	1016	1017
1018	1019	1020	1021	1022	1023
1024	1025	1026	1027	1028	1029
1030	1031	1032	1033	1034	1035
1036	1037	1038	1039	1040	1041
1042	1043	1044	1045	1046	1047
1048	1049	1050	1051	1052	1053
1054	1055	1056	1057	1058	1059
1060	1061	1062	1063	1064	1065
1066	1067	1068	1069	1070	1071
1072	1073	1074	1075	1076	1077
1078	1079	1080	1081	1082	1083
1084	1085	1086	1087	1088	1089
1090	1091	1092	1093	1094	1095
1096	1097	1098	1099	1100	1101
1102	1103	1104	1105	1106	1107
1108	1109	1110	1111	1112	1113
1114	1115	1116	1117	1118	1119
1120	1121	1122	1123	1124	1125
1126	1127	1128	1129	1130	1131
1132	1133	1134	1135	1136	1137
1138	1139	1140	1141	1142	1143
1144	1145	1146	1147	1148	1149
1150	1151	1152	1153	1154	1155
1156	1157	1158	1159	1160	1161
1162	1163	1164	1165	1166	1167
1168	1169	1170	1171	1172	1173
1174	1175	1176	1177	1178	1179
1180	1181	1182	1183	1184	1185
1186	1187	1188	1189	1190	1191
1192	1193	1194	1195	1196	1197
1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209
1210	1211	1212	1213	1214	1215
1216	1217	1218	1219	1220	1221
1222	1223	1224	1225	1226	1227
1228	1229	1230	1231	1232	1233
1234	1235	1236	1237	1238	1239
1240	1241	1242	1243	1244	1245
1246	1247	1248	1249	1250	1251
 	

Table B10C-1.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 10C-1

[illegible]

Table E10C-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 10C-1

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	4.883E-02	3.467E+00	3.014E-02	3.546E+00
1404	1.306E-02	3.615E+00	8.578E-03	3.637E+00
1405	0.000E+00	6.220E+00	0.000E+00	6.220E+00
1505	1.162E-02	3.230E+00	7.041E-03	3.248E+00
1507	8.342E-03	3.259E+00	5.837E-03	3.273E+00
1606	7.922E-03	3.089E+00	5.459E-03	3.102E+00
1607	1.008E-02	2.854E+00	6.772E-03	2.871E+00
2507	5.286E-02	3.906E+00	3.553E-02	3.995E+00
2405	1.414E-02	3.920E+00	1.012E-02	3.945E+00
2506	9.911E-03	4.558E+00	7.449E-03	4.575E+00
2508	1.432E-02	4.107E+00	9.413E-03	4.131E+00
2607	1.042E-02	3.620E+00	7.871E-03	3.638E+00
2608	7.131E-03	3.339E+00	5.753E-03	3.352E+00
2609	7.904E-03	3.997E+00	6.244E-03	4.011E+00

Table E10C-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 10C-1

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-1	1506	2.776E+15	1.795E+15
MFA-2	2507	3.151E+15	2.031E+15

Table E10C-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 10C-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7935E-02	1.4139E-02	0.0000E+00
-92.78	5.9980E-02	2.7269E-02	0.0000E+00
-87.78	9.6092E-02	4.3564E-02	0.0000E+00
-82.78	1.3904E-01	6.4861E-02	0.0000E+00
-77.78	1.9182E-01	9.3445E-02	0.0000E+00
-72.15	2.5242E-01	1.3057E-01	0.0000E+00
-65.90	3.1388E-01	1.7795E-01	0.0000E+00
-60.35	3.7785E-01	2.4219E-01	6.1127E-02
-55.49	4.6072E-01	3.2744E-01	7.2510E-02
-50.62	5.5564E-01	4.3890E-01	8.8669E-02
-47.17	6.3107E-01	5.4445E-01	1.0652E-01
-43.58	7.1021E-01	6.6413E-01	7.6871E-01
-38.45	8.2534E-01	8.0746E-01	8.5338E-01
-33.32	9.3196E-01	9.2831E-01	9.5163E-01
-28.20	1.0246E+00	1.0278E+00	1.0149E+00
-23.07	1.1017E+00	1.1086E+00	1.0894E+00
-17.94	1.1616E+00	1.1703E+00	1.1476E+00
-12.82	1.2034E+00	1.2125E+00	1.1730E+00
-7.69	1.2271E+00	1.2365E+00	1.1958E+00
-2.56	1.2325E+00	1.2422E+00	1.2009E+00
2.56	1.2196E+00	1.2297E+00	1.1929E+00
7.69	1.1884E+00	1.1989E+00	1.1624E+00
12.82	1.1398E+00	1.1506E+00	1.1149E+00
17.94	1.0752E+00	1.0863E+00	1.0729E+00
23.07	9.9551E-01	1.0055E+00	9.9392E-01
28.20	9.0279E-01	9.0994E-01	9.0251E-01
33.32	7.9961E-01	8.0137E-01	8.2668E-01
38.45	6.8792E-01	6.7827E-01	7.1823E-01
43.58	5.7294E-01	5.4164E-01	6.2028E-01
47.17	4.9730E-01	4.3668E-01	7.3979E-02
50.62	4.2726E-01	3.4633E-01	5.7875E-02
55.49	3.4068E-01	2.5200E-01	4.3191E-02
60.35	2.6373E-01	1.7885E-01	3.2682E-02
64.98	2.1350E-01	1.3462E-01	0.0000E+00
69.39	1.8256E-01	1.1030E-01	0.0000E+00
76.46	1.3823E-01	7.7637E-02	0.0000E+00
86.80	8.9917E-02	4.6440E-02	0.0000E+00
98.14	5.1775E-02	2.5205E-02	0.0000E+00
110.00	2.2018E-02	1.1170E-02	0.0000E+00

Table E10C-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 10C-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.4837E-02	1.2725E-02	0.0000E+00
-92.78	5.3297E-02	2.4557E-02	0.0000E+00
-87.78	8.5430E-02	3.9299E-02	0.0000E+00
-82.78	1.2380E-01	5.8688E-02	0.0000E+00
-77.78	1.7128E-01	8.4939E-02	0.0000E+00
-72.15	2.2638E-01	1.1940E-01	0.0000E+00
-65.90	2.8420E-01	1.6440E-01	0.0000E+00
-60.35	3.4737E-01	2.2690E-01	5.7530E-02
-55.49	4.2985E-01	3.1056E-01	6.9298E-02
-50.62	5.2582E-01	4.2043E-01	8.5980E-02
-47.17	6.0343E-01	5.2467E-01	1.0424E-01
-43.58	6.8553E-01	6.4314E-01	7.4092E-01
-38.45	8.0480E-01	7.8820E-01	8.3340E-01
-33.32	9.1548E-01	9.1228E-01	9.3705E-01
-28.20	1.0120E+00	1.0153E+00	1.0027E+00
-23.07	1.0926E+00	1.0994E+00	1.0809E+00
-17.94	1.1557E+00	1.1641E+00	1.1424E+00
-12.82	1.2003E+00	1.2090E+00	1.1689E+00
-7.69	1.2266E+00	1.2356E+00	1.1942E+00
-2.56	1.2345E+00	1.2437E+00	1.2018E+00
2.56	1.2240E+00	1.2336E+00	1.1959E+00
7.69	1.1953E+00	1.2052E+00	1.1680E+00
12.82	1.1493E+00	1.1594E+00	1.1232E+00
17.94	1.0869E+00	1.0973E+00	1.0848E+00
23.07	1.0087E+00	1.0180E+00	1.0074E+00
28.20	9.1636E-01	9.2289E-01	9.1636E-01
33.32	8.1236E-01	8.1363E-01	8.4158E-01
38.45	6.9874E-01	6.8897E-01	7.3090E-01
43.58	5.8079E-01	5.5021E-01	6.2969E-01
47.17	5.0121E-01	4.4222E-01	7.7943E-02
50.62	4.2632E-01	3.4762E-01	6.0830E-02
55.49	3.3423E-01	2.4860E-01	4.5068E-02
60.35	2.5407E-01	1.7292E-01	3.3821E-02
64.98	2.0425E-01	1.2895E-01	0.0000E+00
69.39	1.7462E-01	1.0563E-01	0.0000E+00
76.46	1.3239E-01	7.4464E-02	0.0000E+00
86.80	8.6170E-02	4.4526E-02	0.0000E+00
98.14	4.9587E-02	2.4120E-02	0.0000E+00
110.00	2.1040E-02	1.0663E-02	0.0000E+00

Table E10C-1.5. Fission Power Distribution by Pin in MFA-1 at EOC 10C-1

CORE POSITION 1506

	0.896	0.902	0.907	0.911	0.915	0.919	0.923	0.926																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
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Table E10C-1.6. Fission Power Distribution by Pin in MFA-2 at EOC 10C-1

CORE POSITION 2507

	1.087	1.075	1.062	1.048	1.034	1.020	1.005	0.989						
	1.089	1.077	1.064	1.051	1.037	1.023	1.008	0.993	0.977					
	1.090	1.079	1.066	1.053	1.040	1.026	1.011	0.997	0.981	0.965				
	1.091	1.080	1.068	1.055	1.042	1.028	1.014	0.999	0.984	0.969	0.953			
	1.091	1.080	1.068	1.056	1.043	1.030	1.016	1.002	0.987	0.972	0.956	0.940		
	1.091	1.080	1.069	1.057	1.044	1.031	1.017	1.003	0.989	0.974	0.958	0.943	0.927	
	1.091	1.080	1.069	1.057	1.045	1.032	1.018	1.005	0.990	0.976	0.960	0.945	0.929	0.913
1.090	1.079	1.068	1.057	1.044	1.032	1.019	1.005	0.991	0.977	0.962	0.947	0.931	0.915	0.899
	1.078	1.067	1.056	1.044	1.032	1.019	1.006	0.992	0.978	0.963	0.948	0.932	0.917	0.901
	1.066	1.055	1.043	1.031	1.018	1.005	0.992	0.978	0.963	0.949	0.933	0.918	0.902	
	1.053	1.042	1.030	1.017	1.005	0.991	0.978	0.963	0.949	0.934	0.919	0.903		
	1.040	1.028	1.016	1.004	0.991	0.977	0.963	0.949	0.934	0.919	0.903			
	1.026	1.014	1.002	0.989	0.976	0.962	0.948	0.934	0.919	0.904				
	1.012	1.000	0.988	0.975	0.961	0.947	0.933	0.918	0.903					
	0.998	0.986	0.973	0.960	0.946	0.932	0.918	0.903						

Table E10C-1.7. Fast Flux Distribution by Pin in MFA-1 at EOC 10C-1

CORE POSITION 1506

0.872	0.880	0.888	0.895	0.902	0.908	0.913	0.918												
0.884	0.893	0.901	0.909	0.916	0.922	0.928	0.934	0.939											
0.896	0.905	0.913	0.921	0.929	0.936	0.943	0.949	0.954	0.959										
0.907	0.916	0.925	0.933	0.941	0.949	0.956	0.962	0.969	0.974	0.979									
0.917	0.926	0.935	0.944	0.953	0.961	0.968	0.975	0.982	0.988	0.994	0.999								
0.925	0.935	0.945	0.954	0.963	0.971	0.979	0.987	0.994	1.001	1.007	1.013	1.019							
0.933	0.944	0.954	0.963	0.972	0.981	0.990	0.998	1.005	1.013	1.020	1.026	1.033	1.038						
0.940	0.951	0.961	0.971	0.981	0.990	0.999	1.007	1.016	1.024	1.031	1.038	1.045	1.052	1.058					
0.957	0.968	0.978	0.988	0.997	1.007	1.016	1.025	1.033	1.041	1.049	1.057	1.064	1.071						
0.973	0.984	0.994	1.004	1.014	1.023	1.032	1.041	1.050	1.059	1.067	1.075	1.082							
0.988	0.999	1.009	1.019	1.029	1.039	1.049	1.058	1.067	1.076	1.084	1.092								
1.003	1.014	1.024	1.034	1.045	1.055	1.065	1.074	1.084	1.093	1.101									
1.017	1.028	1.039	1.049	1.060	1.070	1.080	1.090	1.100	1.109										
1.031	1.042	1.053	1.063	1.074	1.085	1.095	1.105	1.115											
1.044	1.055	1.066	1.077	1.088	1.099	1.110	1.120												

Table E10C-1.8. Fast Flux Distribution by Pin in MFA-2 at EOC 10C-1

CORE POSITION 2507

[illegible]

Table E10C-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 10C-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.7757E+15	2.1369E+15
SE	1.5955E+15	2.2597E+15
SW	1.5631E+15	2.1487E+15
W	1.7554E+15	1.8732E+15
NW	1.9962E+15	1.7488E+15
NE	1.9598E+15	1.8850E+15

Table E10C-1.17. Composition of MFA-1 at EOC 10C-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1851E-05
			U-238	7.0573E-03	6.9351E-03
			Pu-239	0.0000E+00	1.0653E-04
			Pu-240	0.0000E+00	2.6552E-06
			FP	0.0000E+00	1.4629E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	9.2547E-06
			U-238	4.4499E-03	4.3575E-03
			Pu-239	1.7520E-03	1.5712E-03
			Pu-240	2.2340E-04	2.5748E-04
			Pu-241	1.9280E-05	2.1686E-05
			Pu-242	4.7430E-06	4.9477E-06
			Am-241	7.6680E-07	1.6823E-06
			FP	0.0000E+00	2.3644E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	8.9023E-06
			U-238	4.4499E-03	4.3332E-03
			Pu-239	1.7520E-03	1.5245E-03
			Pu-240	2.2340E-04	2.5978E-04
			Pu-241	1.9280E-05	2.1842E-05
			Pu-242	4.7430E-06	4.9487E-06
			Am-241	7.6680E-07	1.6551E-06
			FP	0.0000E+00	3.0546E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	8.7092E-06
			U-238	4.4499E-03	4.3203E-03
			Pu-239	1.7520E-03	1.5010E-03
			Pu-240	2.2340E-04	2.6291E-04
			Pu-241	1.9280E-05	2.2219E-05
			Pu-242	4.7430E-06	4.9740E-06
			Am-241	7.6680E-07	1.6464E-06
			FP	0.0000E+00	3.3820E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	8.7711E-06
			U-238	4.4499E-03	4.3245E-03
			Pu-239	1.7520E-03	1.5083E-03
			Pu-240	2.2340E-04	2.6170E-04
			Pu-241	1.9280E-05	2.2074E-05
			Pu-242	4.7430E-06	4.9638E-06
			Am-241	7.6680E-07	1.6495E-06
			FP	0.0000E+00	3.2806E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	9.0767E-06
			U-238	4.4499E-03	4.3444E-03
			Pu-239	1.7520E-03	1.5446E-03
			Pu-240	2.2340E-04	2.5637E-04
			Pu-241	1.9280E-05	2.1445E-05
			Pu-242	4.7430E-06	4.9220E-06
			Am-241	7.6680E-07	1.6634E-06
			FP	0.0000E+00	2.7777E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	9.5158E-06
			U-238	4.4499E-03	4.3734E-03
			Pu-239	1.7520E-03	1.6003E-03
			Pu-240	2.2340E-04	2.5123E-04
			Pu-241	1.9280E-05	2.0949E-05
			Pu-242	4.7430E-06	4.8980E-06
			Am-241	7.6680E-07	1.6912E-06
			FP	0.0000E+00	1.9830E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2566E-05
			U-238	7.0573E-03	6.9719E-03
			Pu-239	0.0000E+00	7.5587E-05
			Pu-240	0.0000E+00	1.2034E-06
			FP	0.0000E+00	9.6893E-06
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10C-1.18. Composition of MFA-2 at EOC 10C-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1762E-05
			U-238	7.0573E-03	6.9310E-03
			Pu-239	0.0000E+00	1.0974E-04
			Pu-240	0.0000E+00	2.9000E-06
			FP	0.0000E+00	1.5319E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	8.5944E-06
			U-238	4.4270E-03	4.3296E-03
			Pu-239	1.7483E-03	1.5593E-03
			Pu-240	2.2290E-04	2.5958E-04
			Pu-241	1.9040E-05	2.1816E-05
			Pu-242	4.7330E-06	4.9549E-06
			Am-241	7.5700E-07	1.6571E-06
			FP	0.0000E+00	2.4675E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	8.2320E-06
			U-238	4.4270E-03	4.3025E-03
			Pu-239	1.7483E-03	1.5085E-03
			Pu-240	2.2290E-04	2.6240E-04
			Pu-241	1.9040E-05	2.2041E-05
			Pu-242	4.7330E-06	4.9595E-06
			Am-241	7.5700E-07	1.6276E-06
			FP	0.0000E+00	3.2173E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	8.0279E-06
			U-238	4.4270E-03	4.2879E-03
			Pu-239	1.7483E-03	1.4825E-03
			Pu-240	2.2290E-04	2.6598E-04
			Pu-241	1.9040E-05	2.2497E-05
			Pu-242	4.7330E-06	4.9903E-06
			Am-241	7.5700E-07	1.6173E-06
			FP	0.0000E+00	3.5844E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	8.0820E-06
			U-238	4.4270E-03	4.2918E-03
			Pu-239	1.7483E-03	1.4891E-03
			Pu-240	2.2290E-04	2.6488E-04
			Pu-241	1.9040E-05	2.2355E-05
			Pu-242	4.7330E-06	4.9803E-06
			Am-241	7.5700E-07	1.6201E-06
			FP	0.0000E+00	3.4909E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	8.3773E-06
			U-238	4.4270E-03	4.3127E-03
			Pu-239	1.7483E-03	1.5265E-03
			Pu-240	2.2290E-04	2.5938E-04
			Pu-241	1.9040E-05	2.1675E-05
			Pu-242	4.7330E-06	4.9350E-06
			Am-241	7.5700E-07	1.6348E-06
			FP	0.0000E+00	2.9699E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	8.8116E-06
			U-238	4.4270E-03	4.3437E-03
			Pu-239	1.7483E-03	1.5849E-03
			Pu-240	2.2290E-04	2.5400E-04
			Pu-241	1.9040E-05	2.1133E-05
			Pu-242	4.7330E-06	4.9089E-06
			Am-241	7.5700E-07	1.6646E-06
			FP	0.0000E+00	2.1326E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2393E-05
			U-238	7.0573E-03	6.9637E-03
			Pu-239	0.0000E+00	8.2580E-05
			Pu-240	0.0000E+00	1.5164E-06
			FP	0.0000E+00	1.0775E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.7 Cycle 10C-3

Table B10C-3.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 10C-3

CORE POS.	* * * * *	POWER IN MEGAWATTS	* * * * *	
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	4.898E-02	3.503E+00	3.016E-02	3.582E+00
1404	1.309E-02	3.633E+00	8.594E-03	3.655E+00
1405	0.000E+00	6.256E+00	0.000E+00	6.256E+00
1505	1.169E-02	3.250E+00	7.073E-03	3.269E+00
1507	8.393E-03	3.342E+00	5.854E-03	3.356E+00
1606	7.970E-03	3.117E+00	5.487E-03	3.130E+00
1607	1.017E-02	2.924E+00	6.791E-03	2.941E+00
2507	5.305E-02	3.895E+00	3.560E-02	3.984E+00
2405	1.416E-02	3.910E+00	1.012E-02	3.934E+00
2506	9.925E-03	4.542E+00	7.450E-03	4.560E+00
2508	1.439E-02	4.099E+00	9.436E-03	4.123E+00
2607	1.042E-02	3.608E+00	7.866E-03	3.626E+00
2608	7.143E-03	3.331E+00	5.757E-03	3.344E+00
2609	7.942E-03	3.991E+00	6.260E-03	4.005E+00

Table B10C-3.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 10C-3

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.808E+15	1.815E+15
MFA-2	2507	3.145E+15	2.027E+15

Table B10C-3.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 10C-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7391E-02	1.3831E-02	0.0000E+00
-92.78	5.8830E-02	2.6681E-02	0.0000E+00
-87.78	9.4269E-02	4.2637E-02	0.0000E+00
-82.78	1.3644E-01	6.3506E-02	0.0000E+00
-77.78	1.8832E-01	9.1546E-02	0.0000E+00
-72.15	2.4796E-01	1.2803E-01	0.0000E+00
-65.90	3.0866E-01	1.7475E-01	0.0000E+00
-60.35	3.7219E-01	2.3843E-01	6.0577E-02
-55.49	4.5482E-01	3.2321E-01	7.1944E-02
-50.62	5.4982E-01	4.3440E-01	8.8103E-02
-47.17	6.2569E-01	5.3999E-01	1.0595E-01
-43.58	7.0538E-01	6.5977E-01	7.6367E-01
-38.45	8.2172E-01	8.0401E-01	8.4986E-01
-33.32	9.2976E-01	9.2619E-01	9.4964E-01
-28.20	1.0238E+00	1.0270E+00	1.0141E+00
-23.07	1.1022E+00	1.1090E+00	1.0899E+00
-17.94	1.1632E+00	1.1718E+00	1.1493E+00
-12.82	1.2058E+00	1.2148E+00	1.1753E+00
-7.69	1.2301E+00	1.2394E+00	1.1986E+00
-2.56	1.2358E+00	1.2453E+00	1.2039E+00
2.56	1.2227E+00	1.2327E+00	1.1959E+00
7.69	1.1911E+00	1.2014E+00	1.1650E+00
12.82	1.1419E+00	1.1525E+00	1.1169E+00
17.94	1.0764E+00	1.0874E+00	1.0744E+00
23.07	9.9581E-01	1.0057E+00	9.9450E-01
28.20	9.0218E-01	9.0928E-01	9.0211E-01
33.32	7.9793E-01	7.9978E-01	8.2523E-01
38.45	6.8509E-01	6.7571E-01	7.1542E-01
43.58	5.6906E-01	5.3826E-01	6.1613E-01
47.17	4.9291E-01	4.3315E-01	7.3489E-02
50.62	4.2255E-01	3.4274E-01	5.7388E-02
55.49	3.3604E-01	2.4865E-01	4.2735E-02
60.35	2.5947E-01	1.7593E-01	3.2270E-02
64.98	2.0964E-01	1.3209E-01	0.0000E+00
69.39	1.7905E-01	1.0807E-01	0.0000E+00
76.46	1.3533E-01	7.5891E-02	0.0000E+00
86.80	8.7881E-02	4.5290E-02	0.0000E+00
98.14	5.0528E-02	2.4533E-02	0.0000E+00
110.00	2.1463E-02	1.0855E-02	0.0000E+00

Table B10C-3.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 10C-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.4791E-02	1.2691E-02	0.0000E+00
-92.78	5.3209E-02	2.4498E-02	0.0000E+00
-87.78	8.5306E-02	3.9214E-02	0.0000E+00
-82.78	1.2366E-01	5.8578E-02	0.0000E+00
-77.78	1.7116E-01	8.4808E-02	0.0000E+00
-72.15	2.2631E-01	1.1926E-01	0.0000E+00
-65.90	2.8418E-01	1.6428E-01	0.0000E+00
-60.35	3.4741E-01	2.2687E-01	5.7998E-02
-55.49	4.2994E-01	3.1062E-01	6.9790E-02
-50.62	5.2599E-01	4.2061E-01	8.6494E-02
-47.17	6.0367E-01	5.2495E-01	1.0476E-01
-43.58	6.8580E-01	6.4345E-01	7.4151E-01
-38.45	8.0513E-01	7.8861E-01	8.3394E-01
-33.32	9.1588E-01	9.1275E-01	9.3761E-01
-28.20	1.0124E+00	1.0157E+00	1.0030E+00
-23.07	1.0930E+00	1.0998E+00	1.0812E+00
-17.94	1.1560E+00	1.1644E+00	1.1426E+00
-12.82	1.2005E+00	1.2092E+00	1.1689E+00
-7.69	1.2267E+00	1.2356E+00	1.1941E+00
-2.56	1.2345E+00	1.2436E+00	1.2015E+00
2.56	1.2239E+00	1.2334E+00	1.1956E+00
7.69	1.1951E+00	1.2050E+00	1.1676E+00
12.82	1.1490E+00	1.1591E+00	1.1227E+00
17.94	1.0866E+00	1.0969E+00	1.0845E+00
23.07	1.0083E+00	1.0176E+00	1.0070E+00
28.20	9.1604E-01	9.2255E-01	9.1607E-01
33.32	8.1207E-01	8.1332E-01	8.4149E-01
38.45	6.9850E-01	6.8880E-01	7.3088E-01
43.58	5.8061E-01	5.5009E-01	6.2976E-01
47.17	5.0108E-01	4.4215E-01	7.8219E-02
50.62	4.2625E-01	3.4758E-01	6.1101E-02
55.49	3.3414E-01	2.4859E-01	4.5320E-02
60.35	2.5402E-01	1.7291E-01	3.4042E-02
64.98	2.0421E-01	1.2893E-01	0.0000E+00
69.39	1.7458E-01	1.0561E-01	0.0000E+00
76.46	1.3234E-01	7.4433E-02	0.0000E+00
86.80	8.6110E-02	4.4495E-02	0.0000E+00
98.14	4.9536E-02	2.4093E-02	0.0000E+00
110.00	2.1013E-02	1.0647E-02	0.0000E+00

Table B10C-3.5. Fission Power Distribution by Pin in MFA-1 at BOC 10C-3

CORE POSITION 1506

	0.898	0.904	0.909	0.914	0.919	0.924	0.928	0.932						
	0.907	0.914	0.920	0.925	0.930	0.935	0.940	0.944	0.947					
	0.916	0.923	0.930	0.936	0.941	0.946	0.951	0.955	0.959	0.962				
	0.925	0.932	0.939	0.946	0.951	0.957	0.962	0.966	0.970	0.974	0.977			
	0.933	0.941	0.948	0.955	0.961	0.967	0.972	0.977	0.981	0.985	0.988	0.991		
	0.941	0.949	0.957	0.964	0.971	0.977	0.982	0.987	0.992	0.995	0.999	1.001	1.004	
	0.948	0.956	0.965	0.972	0.979	0.986	0.992	0.997	1.002	1.006	1.009	1.012	1.014	1.016
0.955	0.964	0.972	0.980	0.988	0.995	1.001	1.006	1.011	1.015	1.019	1.022	1.024	1.026	1.027
	0.970	0.979	0.988	0.996	1.003	1.009	1.015	1.020	1.025	1.028	1.031	1.034	1.035	1.036
	0.986	0.995	1.003	1.011	1.018	1.024	1.029	1.034	1.038	1.041	1.043	1.045	1.046	
	1.001	1.010	1.018	1.025	1.032	1.037	1.042	1.046	1.050	1.052	1.054	1.055		
	1.017	1.025	1.033	1.039	1.045	1.051	1.055	1.058	1.061	1.063	1.064			
	1.031	1.039	1.047	1.053	1.058	1.063	1.067	1.069	1.071	1.073				
	1.046	1.053	1.060	1.066	1.071	1.075	1.078	1.080	1.081					
	1.060	1.067	1.073	1.078	1.082	1.086	1.088	1.090						

Table B10C-3.6. Fission Power Distribution by Pin in MFA-2 at BOC 10C-3

CORE POSITION 2507

[illegible]

Table B10C-3.7. Fast Flux Distribution by Pin in MFA-1 at BOC 10C-3

CORE POSITION 1506

0.873	0.882	0.890	0.898	0.905	0.912	0.918	0.923												
0.885	0.894	0.903	0.911	0.918	0.925	0.932	0.938	0.943											
0.896	0.906	0.915	0.923	0.931	0.938	0.945	0.952	0.958	0.963										
0.907	0.916	0.926	0.934	0.943	0.951	0.958	0.965	0.971	0.977	0.983									
0.916	0.926	0.936	0.945	0.953	0.962	0.970	0.977	0.984	0.991	0.997	1.002								
0.925	0.935	0.945	0.954	0.963	0.972	0.980	0.988	0.996	1.003	1.009	1.016	1.021							
0.932	0.943	0.953	0.963	0.972	0.981	0.990	0.998	1.006	1.014	1.021	1.028	1.034	1.040						
0.938	0.949	0.960	0.970	0.980	0.989	0.998	1.007	1.016	1.024	1.032	1.039	1.046	1.053	1.059					
0.955	0.966	0.976	0.987	0.996	1.006	1.015	1.024	1.033	1.041	1.049	1.057	1.064	1.071						
0.971	0.982	0.992	1.002	1.012	1.022	1.031	1.041	1.050	1.058	1.067	1.075	1.082							
0.986	0.997	1.007	1.018	1.028	1.038	1.047	1.057	1.066	1.075	1.084	1.092								
1.001	1.011	1.022	1.033	1.043	1.053	1.063	1.073	1.082	1.091	1.100									
1.015	1.025	1.036	1.047	1.057	1.068	1.078	1.088	1.098	1.107										
1.028	1.039	1.050	1.061	1.072	1.082	1.093	1.103	1.113											
1.041	1.052	1.063	1.074	1.085	1.096	1.107	1.118												

Table B10C-3.8. Fast Flux Distribution by Pin in MFA-2 at BOC 10C-3

CORE POSITION 2507

1.099	1.087	1.073	1.059	1.044	1.028	1.011	0.994							
1.099	1.087	1.075	1.061	1.046	1.031	1.015	0.997	0.979						
1.099	1.088	1.075	1.062	1.048	1.033	1.017	1.001	0.983	0.965					
1.099	1.088	1.076	1.063	1.049	1.035	1.019	1.003	0.986	0.968	0.949				
1.098	1.087	1.075	1.063	1.050	1.036	1.021	1.005	0.988	0.971	0.953	0.933			
1.097	1.086	1.075	1.063	1.050	1.036	1.022	1.006	0.990	0.973	0.955	0.937	0.917		
1.095	1.085	1.074	1.062	1.049	1.036	1.022	1.007	0.991	0.975	0.957	0.939	0.920	0.900	
1.094	1.083	1.072	1.061	1.049	1.036	1.022	1.007	0.992	0.976	0.959	0.941	0.923	0.903	0.883
1.081	1.071	1.059	1.047	1.035	1.021	1.007	0.992	0.976	0.960	0.942	0.924	0.905	0.886	
1.068	1.057	1.046	1.033	1.020	1.006	0.992	0.976	0.960	0.943	0.925	0.907	0.888		
1.055	1.043	1.031	1.018	1.005	0.991	0.976	0.960	0.943	0.926	0.908	0.889			
1.041	1.029	1.016	1.003	0.989	0.974	0.959	0.943	0.926	0.908	0.890				
1.026	1.014	1.001	0.987	0.973	0.958	0.942	0.925	0.908	0.890					
1.011	0.998	0.985	0.971	0.956	0.940	0.924	0.907	0.890						
0.994	0.981	0.968	0.953	0.938	0.922	0.906	0.889							

Table B10C-3.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 10C-3

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.7917E+15	2.1335E+15
SE	1.6133E+15	2.2550E+15
SW	1.5874E+15	2.1435E+15
W	1.7839E+15	1.8688E+15
NW	2.0169E+15	1.7453E+15
NE	1.9766E+15	1.8824E+15

Table E10C-3.1. Fission Power Generated in MFA-1, MFA-2
and Neighboring Assemblies at EOC 10C-3

CORE POS.	* * * * *	POWER IN MEGAWATTS		* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1506	5.119E-02	3.480E+00	3.371E-02	3.565E+00
1404	1.329E-02	3.613E+00	9.387E-03	3.635E+00
1405	0.000E+00	6.171E+00	0.000E+00	6.171E+00
1505	1.183E-02	3.291E+00	7.814E-03	3.311E+00
1507	8.538E-03	3.313E+00	6.384E-03	3.328E+00
1606	8.118E-03	3.138E+00	6.068E-03	3.152E+00
1607	1.017E-02	2.914E+00	7.331E-03	2.931E+00
2507	5.497E-02	3.800E+00	3.920E-02	3.894E+00
2405	1.429E-02	3.831E+00	1.090E-02	3.856E+00
2506	1.015E-02	4.447E+00	8.101E-03	4.465E+00
2508	1.438E-02	4.023E+00	1.017E-02	4.048E+00
2607	1.042E-02	3.537E+00	8.402E-03	3.556E+00
2608	7.225E-03	3.260E+00	6.171E-03	3.273E+00
2609	8.099E-03	3.910E+00	6.786E-03	3.925E+00

Table E10C-3.2. Assembly Averaged Total and Fast Flux
in MFA-1 and MFA-2 at EOC 10C-3

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1506	2.830E+15	1.822E+15
MFA-2	2507	3.119E+15	2.001E+15

Table E10C-3.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 10C-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6519E-02	1.3443E-02	0.0000E+00
-92.78	5.6962E-02	2.5933E-02	0.0000E+00
-87.78	9.1282E-02	4.1441E-02	0.0000E+00
-82.78	1.3213E-01	6.1721E-02	0.0000E+00
-77.78	1.8239E-01	8.8979E-02	0.0000E+00
-72.15	2.4017E-01	1.2444E-01	0.0000E+00
-65.90	2.9897E-01	1.6987E-01	0.0000E+00
-60.35	3.6048E-01	2.3190E-01	6.4695E-02
-55.49	4.4056E-01	3.1416E-01	7.6158E-02
-50.62	5.3266E-01	4.2186E-01	9.2128E-02
-47.17	6.0613E-01	5.2400E-01	1.0948E-01
-43.58	6.8338E-01	6.3984E-01	7.4132E-01
-38.45	7.9680E-01	7.8015E-01	8.2585E-01
-33.32	9.0281E-01	8.9972E-01	9.2417E-01
-28.20	9.9613E-01	9.9937E-01	9.8552E-01
-23.07	1.0752E+00	1.0819E+00	1.0620E+00
-17.94	1.1385E+00	1.1467E+00	1.1235E+00
-12.82	1.1849E+00	1.1934E+00	1.1517E+00
-7.69	1.2145E+00	1.2233E+00	1.1801E+00
-2.56	1.2269E+00	1.2360E+00	1.1921E+00
2.56	1.2219E+00	1.2315E+00	1.1925E+00
7.69	1.1991E+00	1.2091E+00	1.1703E+00
12.82	1.1586E+00	1.1691E+00	1.1311E+00
17.94	1.1009E+00	1.1119E+00	1.0997E+00
23.07	1.0258E+00	1.0358E+00	1.0252E+00
28.20	9.3466E-01	9.4191E-01	9.3526E-01
33.32	8.3014E-01	8.3216E-01	8.6256E-01
38.45	7.1481E-01	7.0519E-01	7.4994E-01
43.58	5.9500E-01	5.6298E-01	6.4728E-01
47.17	5.1600E-01	4.5370E-01	8.1158E-02
50.62	4.4289E-01	3.5957E-01	6.4155E-02
55.49	3.5263E-01	2.6128E-01	4.8439E-02
60.35	2.7256E-01	1.8511E-01	3.6995E-02
64.98	2.2047E-01	1.3908E-01	0.0000E+00
69.39	1.8840E-01	1.1384E-01	0.0000E+00
76.46	1.4250E-01	7.9997E-02	0.0000E+00
86.80	9.2544E-02	4.7759E-02	0.0000E+00
98.14	5.3175E-02	2.5861E-02	0.0000E+00
110.00	2.2531E-02	1.1422E-02	0.0000E+00

Table E10C-3.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 10C-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.4241E-02	1.2457E-02	0.0000E+00
-92.78	5.2030E-02	2.4043E-02	0.0000E+00
-87.78	8.3411E-02	3.8477E-02	0.0000E+00
-82.78	1.2090E-01	5.7460E-02	0.0000E+00
-77.78	1.6732E-01	8.3172E-02	0.0000E+00
-72.15	2.2120E-01	1.1692E-01	0.0000E+00
-65.90	2.7764E-01	1.6100E-01	0.0000E+00
-60.35	3.3915E-01	2.2233E-01	6.2613E-02
-55.49	4.1953E-01	3.0407E-01	7.4612E-02
-50.62	5.1304E-01	4.1119E-01	9.1268E-02
-47.17	5.8860E-01	5.1263E-01	1.0920E-01
-43.58	6.6848E-01	6.2781E-01	7.2482E-01
-38.45	7.8512E-01	7.6946E-01	8.1562E-01
-33.32	8.9396E-01	8.9123E-01	9.1789E-01
-28.20	9.8965E-01	9.9299E-01	9.7947E-01
-23.07	1.0708E+00	1.0772E+00	1.0581E+00
-17.94	1.1356E+00	1.1435E+00	1.1212E+00
-12.82	1.1833E+00	1.1913E+00	1.1487E+00
-7.69	1.2139E+00	1.2222E+00	1.1782E+00
-2.56	1.2273E+00	1.2359E+00	1.1911E+00
2.56	1.2232E+00	1.2322E+00	1.1919E+00
7.69	1.2012E+00	1.2108E+00	1.1707E+00
12.82	1.1618E+00	1.1718E+00	1.1325E+00
17.94	1.1053E+00	1.1159E+00	1.1035E+00
23.07	1.0315E+00	1.0412E+00	1.0306E+00
28.20	9.4191E-01	9.4887E-01	9.4229E-01
33.32	8.3878E-01	8.4048E-01	8.7337E-01
38.45	7.2420E-01	7.1452E-01	7.6154E-01
43.58	6.0400E-01	5.7258E-01	6.5854E-01
47.17	5.2241E-01	4.6127E-01	8.6415E-02
50.62	4.4543E-01	3.6360E-01	6.8451E-02
55.49	3.5019E-01	2.6088E-01	5.1599E-02
60.35	2.6699E-01	1.8202E-01	3.9296E-02
64.98	2.1523E-01	1.3601E-01	0.0000E+00
69.39	1.8428E-01	1.1156E-01	0.0000E+00
76.46	1.3998E-01	7.8790E-02	0.0000E+00
86.80	9.1232E-02	4.7187E-02	0.0000E+00
98.14	5.2522E-02	2.5579E-02	0.0000E+00
110.00	2.2270E-02	1.1304E-02	0.0000E+00

Table E10C-3.5. Fission Power Distribution by Pin in MFA-1 at EOC 10C-3

CORE POSITION 1506

0.899 0.904 0.909 0.914 0.918 0.922 0.926 0.930

0.909 0.915 0.920 0.925 0.930 0.934 0.938 0.942 0.945

0.919 0.925 0.931 0.936 0.941 0.945 0.950 0.953 0.957 0.960

0.928 0.934 0.941 0.946 0.952 0.956 0.961 0.965 0.968 0.971 0.974

0.936 0.943 0.950 0.956 0.962 0.967 0.972 0.976 0.979 0.983 0.985 0.988

0.945 0.952 0.959 0.966 0.972 0.977 0.982 0.986 0.990 0.993 0.996 0.999 1.000

0.952 0.960 0.968 0.974 0.981 0.987 0.992 0.996 1.001 1.004 1.007 1.009 1.011 1.012

0.960 0.968 0.976 0.983 0.990 0.996 1.001 1.006 1.010 1.014 1.017 1.019 1.021 1.022 1.023

0.975 0.983 0.991 0.998 1.004 1.010 1.015 1.020 1.024 1.027 1.029 1.031 1.032 1.033

0.991 0.999 1.006 1.013 1.019 1.024 1.029 1.033 1.036 1.039 1.041 1.042 1.042

1.006 1.014 1.021 1.027 1.033 1.038 1.042 1.045 1.048 1.050 1.051 1.052

1.021 1.028 1.035 1.041 1.046 1.050 1.054 1.057 1.059 1.060 1.061

1.035 1.042 1.049 1.054 1.059 1.063 1.065 1.068 1.069 1.070

1.049 1.056 1.062 1.067 1.071 1.074 1.076 1.078 1.079

1.063 1.069 1.074 1.079 1.082 1.085 1.087 1.088

Table E10C-3.6. Fission Power Distribution by Pin in MFA-2 at EOC 10C-3

CORE POSITION 2507

[illegible]

Table E10C-3.7. Fast Flux Distribution by Pin in MFA-1 at EOC 10C-3

CORE POSITION 1506

		0.875	0.883	0.890	0.898	0.904	0.910	0.916	0.921					
		0.887	0.895	0.903	0.911	0.918	0.925	0.931	0.936	0.941				
		0.899	0.907	0.916	0.923	0.931	0.938	0.944	0.950	0.956	0.961			
		0.909	0.918	0.927	0.935	0.943	0.950	0.957	0.964	0.970	0.975	0.980		
		0.919	0.929	0.937	0.946	0.954	0.962	0.969	0.976	0.982	0.989	0.994	1.000	
		0.928	0.938	0.947	0.956	0.964	0.972	0.980	0.987	0.994	1.001	1.007	1.013	1.018
		0.936	0.946	0.956	0.965	0.973	0.982	0.990	0.998	1.005	1.012	1.019	1.025	1.032
		0.943	0.954	0.963	0.973	0.982	0.990	0.999	1.007	1.015	1.023	1.030	1.037	1.044
		0.960	0.970	0.979	0.989	0.998	1.007	1.015	1.024	1.032	1.040	1.047	1.054	1.061
		0.975	0.985	0.995	1.004	1.014	1.023	1.031	1.040	1.048	1.056	1.064	1.072	1.079
		0.990	1.000	1.010	1.019	1.029	1.038	1.047	1.056	1.064	1.073	1.081	1.089	
		1.005	1.014	1.024	1.034	1.043	1.053	1.062	1.071	1.080	1.089	1.097		
		1.018	1.028	1.038	1.048	1.058	1.067	1.077	1.086	1.096	1.105			
		1.031	1.041	1.051	1.062	1.072	1.082	1.091	1.101	1.111				
		1.044	1.054	1.064	1.075	1.085	1.095	1.105	1.115					

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Table E10C-3.8. Fast Flux Distribution by Pin in MFA-2 at EOC 10C-3

CORE POSITION 2507

[illegible]

Table E10C-3.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 10C-3

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.8080E+15	2.1087E+15
SE	1.6258E+15	2.2279E+15
SW	1.5922E+15	2.1179E+15
W	1.7850E+15	1.8446E+15
NW	2.0179E+15	1.7209E+15
NE	1.9838E+15	1.8582E+15

Table E10C-3.10. Assembly Outlet Temperatures and
Flow Rates at EOC 10C-3

CORE POS.	CALCULATED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1506	1001	114180
1404	873	206750
1405	1018	186110
1505	861	196600
1507	860	196600
1606	877	169550
1607	870	162600
2507	1045	114180
2405	891	206770
2506	920	206750
2508	898	196600
2607	921	162600
2608	897	169550
2609	945	162600

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.67E+06 lb/hr.

Table E10C-3.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 10C-3

[illegible]

Table E10C-3.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 10C-3

TEMPERATURE MAP FOR BUNDLE #2		ASSEMBLY NO. 2307		MFA-2	
AXIAL HEIGHT		43.440 IN		885	
891 926	• 960	1024	1058	1062	1059 1055 1050 1048 1004 948 • 929 989
892 927	• 961	1025	1059	1063	1060 1056 1051 1049 1005 949 • 930 990
893 928	• 962	1026	1060	1064	1061 1057 1052 1050 1006 950 • 931 991
894 929	• 963	1027	1061	1065	1062 1058 1053 1051 1007 951 • 932 992
895 930	• 964	1028	1062	1066	1063 1059 1054 1052 1008 952 • 933 993
896 931	• 965	1029	1063	1067	1064 1060 1055 1053 1009 953 • 934 994
897 932	• 966	1030	1064	1068	1065 1061 1056 1054 1010 954 • 935 995
898 933	• 967	1031	1065	1069	1066 1062 1057 1055 1011 955 • 936 996
899 934	• 968	1032	1066	1070	1067 1063 1058 1056 1012 956 • 937 997
900 935	• 969	1033	1067	1071	1068 1064 1059 1057 1013 957 • 938 998
901 936	• 970	1034	1068	1072	1069 1065 1060 1058 1014 958 • 939 999
902 937	• 971	1035	1069	1073	1070 1066 1061 1059 1015 959 • 940 1000
903 938	• 972	1036	1070	1074	1071 1067 1062 1060 1016 960 • 941 1001
904 939	• 973	1037	1071	1075	1072 1068 1063 1061 1017 961 • 942 1002
905 940	• 974	1038	1072	1076	1073 1069 1064 1062 1018 962 • 943 1003
906 941	• 975	1039	1073	1077	1074 1070 1065 1063 1019 963 • 944 1004
907 942	• 976	1040	1074	1078	1075 1071 1066 1064 1020 964 • 945 1005
908 943	• 977	1041	1075	1079	1076 1072 1067 1065 1021 965 • 946 1006
909 944	• 978	1042	1076	1080	1077 1073 1068 1066 1022 966 • 947 1007
910 945	• 979	1043	1077	1081	1078 1074 1069 1067 1023 967 • 948 1008
911 946	• 980	1044	1078	1082	1079 1075 1070 1068 1024 968 • 949 1009
912 947	• 981	1045	1079	1083	1080 1076 1071 1069 1025 969 • 950 1010
913 948	• 982	1046	1080	1084	1081 1077 1072 1070 1026 970 • 951 1011
914 949	• 983	1047	1081	1085	1082 1078 1073 1071 1027 971 • 952 1012
915 950	• 984	1048	1082	1086	1083 1079 1074 1072 1028 972 • 953 1013
 

Table E10C-3.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 10C-3

[illegible]

Table E10C-3.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 10C-3

TEMPERATURE MAP FOR CUNCLE 52	ASSEMBLY NO. 2507	MFA-3
AXIAL HEIGHT	50-806 IN	806
936	951 952 951 948 944 940 936	985
903 935	974 1017 1048 1051 1031 1028 1023 1016 929	942 921
907 945	1050 1063 1086 1086 1081 1075 1063 1029	943 933
906	978 1031 1084 1089 1098 1094 1083 1081 1062 1010 962	943 933
905	1060 1082 1112 1110 1105 1100 1093 1075 1031	943 933
904	1037 1034 1115 1111 1106 1100 1090 1064 1088 958	941 923
903	1107 1117 1112 1107 1101 1091 1074 1028	941 923
902	1042 1098 1118 1119 1115 1110 1104 1097 1081 960 1003 941	938 971
901	1065 1103 1121 1119 1114 1108 1105 1097 1088 1063 1022 941	934 912
900	1115 1111 1106 1100 1090 1064 1088 958	934 912
899	1110 1122 1120 1115 1109 1103 1097 1092 1083 1062 1016	930 915
898	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
897	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
896	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
895	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
894	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
893	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
892	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
891	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
890	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
889	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
888	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
887	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
886	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
885	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
884	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
883	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
882	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
881	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
880	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
879	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
878	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
877	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
876	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
875	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
874	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
873	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
872	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
871	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
870	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
869	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
868	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
867	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
866	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
865	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
864	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
863	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915
862	1122 1121 1116 1109 1103 1097 1092 1083 1062 1016	930 915

Table E10C-3.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 10C-3

[illegible]

Table E10C-3.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 10C-3

[illegible]

Table E10C-3.17. Composition of MFA-1 at EOC 10C-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1526E-05
			U-238	7.0573E-03	6.9165E-03
			Pu-239	0.0000E+00	1.2130E-04
			Pu-240	0.0000E+00	3.5232E-06
			FP	0.0000E+00	1.7762E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	9.0385E-06
			U-238	4.4499E-03	4.3439E-03
			Pu-239	1.7520E-03	1.5466E-03
			Pu-240	2.2340E-04	2.6208E-04
			Pu-241	1.9280E-05	2.2098E-05
			Pu-242	4.7430E-06	4.9837E-06
			Am-241	7.6680E-07	1.8205E-06
			FP	0.0000E+00	2.6964E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	8.6455E-06
			U-238	4.4499E-03	4.3161E-03
			Pu-239	1.7520E-03	1.4943E-03
			Pu-240	2.2340E-04	2.6446E-04
			Pu-241	1.9280E-05	2.2275E-05
			Pu-242	4.7430E-06	4.9856E-06
			Am-241	7.6680E-07	1.7881E-06
			FP	0.0000E+00	3.4754E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	8.4302E-06
			U-238	4.4499E-03	4.3014E-03
			Pu-239	1.7520E-03	1.4682E-03
			Pu-240	2.2340E-04	2.6788E-04
			Pu-241	1.9280E-05	2.2712E-05
			Pu-242	4.7430E-06	5.0163E-06
			Am-241	7.6680E-07	1.7785E-06
			FP	0.0000E+00	3.8443E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	8.4993E-06
			U-238	4.4499E-03	4.3061E-03
			Pu-239	1.7520E-03	1.4763E-03
			Pu-240	2.2340E-04	2.6655E-04
			Pu-241	1.9280E-05	2.2543E-05
			Pu-242	4.7430E-06	5.0039E-06
			Am-241	7.6680E-07	1.7817E-06
			FP	0.0000E+00	3.7302E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	8.8408E-06
			U-238	4.4499E-03	4.3290E-03
			Pu-239	1.7520E-03	1.5169E-03
			Pu-240	2.2340E-04	2.6065E-04
			Pu-241	1.9280E-05	2.1811E-05
			Pu-242	4.7430E-06	4.9533E-06
			Am-241	7.6680E-07	1.7969E-06
			FP	0.0000E+00	3.1622E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	9.3336E-06
			U-238	4.4499E-03	4.3622E-03
			Pu-239	1.7520E-03	1.5794E-03
			Pu-240	2.2340E-04	2.5502E-04
			Pu-241	1.9280E-05	2.1233E-05
			Pu-242	4.7430E-06	4.9240E-06
			Am-241	7.6680E-07	1.8292E-06
			FP	0.0000E+00	2.2626E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2337E-05
			U-238	7.0573E-03	6.9590E-03
			Pu-239	0.0000E+00	8.6411E-05
			Pu-240	0.0000E+00	1.6016E-06
			FP	0.0000E+00	1.1607E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E10C-3.18. Composition of MFA-2 at EOC 10C-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1426E-05
			U-238	7.0573E-03	6.9116E-03
			Pu-239	0.0000E+00	1.2509E-04
			Pu-240	0.0000E+00	3.8246E-06
			FP	0.0000E+00	1.8713E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	8.3743E-06
			U-238	4.4270E-03	4.3147E-03
			Pu-239	1.7483E-03	1.5325E-03
			Pu-240	2.2290E-04	2.6454E-04
			Pu-241	1.9040E-05	2.2289E-05
			Pu-242	4.7330E-06	4.9949E-06
			Am-241	7.5700E-07	1.7938E-06
			FP	0.0000E+00	2.8292E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	7.9675E-06
			U-238	4.4270E-03	4.2836E-03
			Pu-239	1.7483E-03	1.4754E-03
			Pu-240	2.2290E-04	2.6751E-04
			Pu-241	1.9040E-05	2.2554E-05
			Pu-242	4.7330E-06	5.0019E-06
			Am-241	7.5700E-07	1.7585E-06
			FP	0.0000E+00	3.6809E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	7.7398E-06
			U-238	4.4270E-03	4.2668E-03
			Pu-239	1.7483E-03	1.4464E-03
			Pu-240	2.2290E-04	2.7143E-04
			Pu-241	1.9040E-05	2.3086E-05
			Pu-242	4.7330E-06	5.0397E-06
			Am-241	7.5700E-07	1.7473E-06
			FP	0.0000E+00	4.0961E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	7.7995E-06
			U-238	4.4270E-03	4.2712E-03
			Pu-239	1.7483E-03	1.4536E-03
			Pu-240	2.2290E-04	2.7024E-04
			Pu-241	1.9040E-05	2.2922E-05
			Pu-242	4.7330E-06	5.0275E-06
			Am-241	7.5700E-07	1.7502E-06
			FP	0.0000E+00	3.9914E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	8.1294E-06
			U-238	4.4270E-03	4.2952E-03
			Pu-239	1.7483E-03	1.4955E-03
			Pu-240	2.2290E-04	2.6418E-04
			Pu-241	1.9040E-05	2.2130E-05
			Pu-242	4.7330E-06	4.9722E-06
			Am-241	7.5700E-07	1.7660E-06
			FP	0.0000E+00	3.4023E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	8.6180E-06
			U-238	4.4270E-03	4.3309E-03
			Pu-239	1.7483E-03	1.5612E-03
			Pu-240	2.2290E-04	2.5831E-04
			Pu-241	1.9040E-05	2.1495E-05
			Pu-242	4.7330E-06	4.9398E-06
			Am-241	7.5700E-07	1.8008E-06
			FP	0.0000E+00	2.4498E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2136E-05
			U-238	7.0573E-03	6.9491E-03
			Pu-239	0.0000E+00	9.4601E-05
			Pu-240	0.0000E+00	2.0115E-06
			FP	0.0000E+00	1.3042E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.8 Cycle 11A-1

Table B11A-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11A-1

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1404	6.085E-02	4.110E+00	3.409E-02	4.205E+00
1303	1.404E-01	1.753E+00	6.482E-02	1.958E+00
1304	9.466E-03	4.457E+00	6.901E-03	4.474E+00
1403	1.384E-02	3.372E+00	7.286E-03	3.393E+00
1405	7.053E-03	3.819E+00	5.489E-03	3.831E+00
1505	6.327E-03	3.917E+00	4.270E-03	3.928E+00
1506	8.765E-03	3.894E+00	6.190E-03	3.909E+00
2506	5.978E-02	3.888E+00	3.772E-02	3.986E+00
2404	0.000E+00	7.201E+00	0.000E+00	7.201E+00
2505	1.284E-02	4.088E+00	6.851E-03	4.108E+00
2405	1.409E-02	3.658E+00	9.874E-03	3.682E+00
2606	6.053E-03	3.953E+00	4.677E-03	3.963E+00
2607	1.330E-02	3.421E+00	7.627E-03	3.442E+00
2507	9.345E-03	4.037E+00	7.145E-03	4.054E+00

Table B11A-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11A-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1404	3.341E+15	2.061E+15
MFA-2	2506	3.210E+15	2.098E+15

Table B11A-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8900E-02	1.5414E-02	0.0000E+00
-92.78	6.2037E-02	2.9706E-02	0.0000E+00
-87.78	9.9360E-02	4.7415E-02	0.0000E+00
-82.78	1.4364E-01	7.0505E-02	0.0000E+00
-77.78	1.9764E-01	1.0136E-01	0.0000E+00
-72.15	2.5852E-01	1.4101E-01	0.0000E+00
-65.90	3.1917E-01	1.9031E-01	0.0000E+00
-60.35	3.8225E-01	2.5570E-01	6.5143E-02
-55.49	4.6476E-01	3.4106E-01	7.6558E-02
-50.62	5.5963E-01	4.5024E-01	9.2787E-02
-47.17	6.3498E-01	5.5224E-01	1.1023E-01
-43.58	7.1408E-01	6.6838E-01	7.6972E-01
-38.45	8.2850E-01	8.0945E-01	8.6005E-01
-33.32	9.3490E-01	9.3033E-01	9.5930E-01
-28.20	1.0281E+00	1.0312E+00	1.0191E+00
-23.07	1.1060E+00	1.1138E+00	1.0942E+00
-17.94	1.1669E+00	1.1771E+00	1.1532E+00
-12.82	1.2095E+00	1.2207E+00	1.1771E+00
-7.69	1.2336E+00	1.2453E+00	1.2001E+00
-2.56	1.2387E+00	1.2505E+00	1.2048E+00
2.56	1.2247E+00	1.2365E+00	1.1965E+00
7.69	1.1916E+00	1.2030E+00	1.1641E+00
12.82	1.1403E+00	1.1511E+00	1.1140E+00
17.94	1.0726E+00	1.0826E+00	1.0719E+00
23.07	9.8984E-01	9.9787E-01	9.8964E-01
28.20	8.9465E-01	8.9913E-01	8.9546E-01
33.32	7.8940E-01	7.8826E-01	8.2031E-01
38.45	6.7635E-01	6.6474E-01	7.0820E-01
43.58	5.6025E-01	5.2995E-01	6.0221E-01
47.17	4.8182E-01	4.2649E-01	7.1930E-02
50.62	4.0783E-01	3.3600E-01	5.5945E-02
55.49	3.1648E-01	2.4061E-01	4.0944E-02
60.35	2.3769E-01	1.6740E-01	3.0189E-02
64.98	1.8895E-01	1.2522E-01	0.0000E+00
69.39	1.6085E-01	1.0302E-01	0.0000E+00
76.46	1.2144E-01	7.3261E-02	0.0000E+00
86.80	7.8816E-02	4.4267E-02	0.0000E+00
98.14	4.5361E-02	2.4214E-02	0.0000E+00
110.00	1.9445E-02	1.0830E-02	0.0000E+00

Table B11A-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6257E-02	1.3318E-02	0.0000E+00
-92.78	5.6350E-02	2.5714E-02	0.0000E+00
-87.78	9.0358E-02	4.1172E-02	0.0000E+00
-82.78	1.3096E-01	6.1493E-02	0.0000E+00
-77.78	1.8109E-01	8.8954E-02	0.0000E+00
-72.15	2.3897E-01	1.2487E-01	0.0000E+00
-65.90	2.9893E-01	1.7137E-01	0.0000E+00
-60.35	3.6304E-01	2.3529E-01	6.6934E-02
-55.49	4.4615E-01	3.2012E-01	7.9371E-02
-50.62	5.4192E-01	4.3106E-01	9.6739E-02
-47.17	6.1844E-01	5.3585E-01	1.1549E-01
-43.58	6.9898E-01	6.5437E-01	7.5801E-01
-38.45	8.1646E-01	7.9879E-01	8.4853E-01
-33.32	9.2559E-01	9.2176E-01	9.5091E-01
-28.20	1.0207E+00	1.0236E+00	1.0110E+00
-23.07	1.1001E+00	1.1066E+00	1.0879E+00
-17.94	1.1621E+00	1.1704E+00	1.1483E+00
-12.82	1.2056E+00	1.2144E+00	1.1713E+00
-7.69	1.2307E+00	1.2399E+00	1.1954E+00
-2.56	1.2372E+00	1.2467E+00	1.2015E+00
2.56	1.2249E+00	1.2350E+00	1.1944E+00
7.69	1.1939E+00	1.2044E+00	1.1642E+00
12.82	1.1451E+00	1.1558E+00	1.1168E+00
17.94	1.0800E+00	1.0909E+00	1.0785E+00
23.07	9.9923E-01	1.0090E+00	9.9848E-01
28.20	9.0512E-01	9.1201E-01	9.0546E-01
33.32	8.0002E-01	8.0160E-01	8.3257E-01
38.45	6.8595E-01	6.7647E-01	7.2015E-01
43.58	5.6832E-01	5.3811E-01	6.1653E-01
47.17	4.9079E-01	4.3309E-01	8.1691E-02
50.62	4.1923E-01	3.4253E-01	6.4479E-02
55.49	3.3134E-01	2.4775E-01	4.8433E-02
60.35	2.5374E-01	1.7425E-01	3.6735E-02
64.98	2.0336E-01	1.2985E-01	0.0000E+00
69.39	1.7279E-01	1.0569E-01	0.0000E+00
76.46	1.2945E-01	7.3528E-02	0.0000E+00
86.80	8.3013E-02	4.3292E-02	0.0000E+00
98.14	4.7156E-02	2.3148E-02	0.0000E+00
110.00	1.9979E-02	1.0180E-02	0.0000E+00

Table B11A-1.5. Fission Power Distribution by Pin in MFA-1 at BOC 11A-1

CORE POSITION 1404

```
0.936 0.942 0.948 0.954 0.959 0.964 0.969 0.973  
0.940 0.947 0.953 0.959 0.965 0.970 0.974 0.979 0.982  
0.944 0.951 0.957 0.964 0.969 0.975 0.980 0.984 0.988 0.992  
0.948 0.955 0.961 0.968 0.974 0.979 0.984 0.989 0.993 0.997 1.001  
0.951 0.958 0.965 0.971 0.978 0.983 0.989 0.993 0.998 1.002 1.006 1.009  
0.953 0.961 0.968 0.975 0.981 0.987 0.992 0.998 1.002 1.007 1.011 1.014 1.018  
0.956 0.964 0.971 0.978 0.984 0.990 0.996 1.001 1.006 1.011 1.015 1.019 1.022 1.026  
0.958 0.966 0.973 0.980 0.987 0.993 0.999 1.004 1.010 1.014 1.019 1.023 1.027 1.030 1.033  
0.968 0.975 0.982 0.989 0.995 1.002 1.007 1.013 1.018 1.022 1.027 1.031 1.034 1.038  
0.977 0.984 0.991 0.998 1.004 1.010 1.015 1.020 1.025 1.030 1.034 1.038 1.042  
0.986 0.993 0.999 1.006 1.012 1.017 1.023 1.028 1.033 1.037 1.041 1.045  
0.994 1.001 1.007 1.013 1.019 1.025 1.030 1.035 1.040 1.044 1.048  
1.002 1.009 1.015 1.021 1.026 1.032 1.037 1.042 1.047 1.051  
1.010 1.016 1.022 1.028 1.033 1.039 1.044 1.049 1.053  
1.017 1.023 1.029 1.034 1.040 1.045 1.050 1.055
```

Table B11A-1.6. Fission Power Distribution by Pin in MFA-2 at BOC 11A-1

CORE POSITION 2506

	1.037	1.029	1.020	1.010	1.000	0.988	0.976	0.963						
	1.043	1.035	1.026	1.017	1.006	0.995	0.983	0.970	0.957					
	1.049	1.041	1.032	1.023	1.012	1.001	0.990	0.977	0.964	0.951				
	1.054	1.046	1.038	1.028	1.018	1.008	0.996	0.984	0.971	0.957	0.943			
	1.059	1.051	1.043	1.034	1.024	1.013	1.002	0.990	0.977	0.964	0.950	0.936		
	1.064	1.056	1.048	1.039	1.029	1.019	1.008	0.996	0.983	0.970	0.956	0.942	0.927	
	1.069	1.061	1.053	1.044	1.034	1.024	1.013	1.001	0.989	0.976	0.962	0.948	0.933	0.919
1.073	1.066	1.057	1.048	1.039	1.029	1.018	1.006	0.994	0.981	0.968	0.954	0.939	0.925	0.910
	1.070	1.061	1.053	1.043	1.033	1.023	1.011	0.999	0.986	0.973	0.959	0.945	0.931	0.916
	1.065	1.056	1.047	1.037	1.027	1.016	1.004	0.991	0.978	0.965	0.951	0.936	0.921	
	1.060	1.051	1.041	1.031	1.020	1.008	0.996	0.983	0.970	0.956	0.941	0.927		
	1.054	1.044	1.034	1.023	1.012	1.000	0.987	0.974	0.960	0.946	0.932			
	1.047	1.037	1.026	1.015	1.003	0.991	0.978	0.965	0.951	0.937				
	1.039	1.029	1.018	1.006	0.994	0.982	0.969	0.955	0.941					
	1.031	1.020	1.009	0.997	0.985	0.972	0.959	0.945						

Table B11A-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 11A-1

CORE POSITION 2506

	1.067	1.051	1.035	1.019	1.003	0.987	0.970	0.953						
	1.074	1.059	1.044	1.028	1.012	0.996	0.979	0.963	0.946					
	1.081	1.066	1.051	1.036	1.020	1.004	0.988	0.972	0.955	0.938				
	1.086	1.072	1.057	1.042	1.027	1.012	0.996	0.980	0.964	0.947	0.930			
	1.090	1.076	1.063	1.048	1.034	1.019	1.003	0.988	0.972	0.955	0.938	0.921		
	1.093	1.080	1.067	1.053	1.039	1.025	1.010	0.995	0.979	0.963	0.946	0.929	0.912	
1.094	1.082	1.070	1.057	1.044	1.030	1.015	1.001	0.985	0.970	0.953	0.937	0.919	0.901	
1.095	1.084	1.072	1.060	1.047	1.034	1.020	1.006	0.991	0.976	0.960	0.944	0.927	0.909	0.891
1.084	1.073	1.062	1.050	1.038	1.024	1.011	0.996	0.981	0.966	0.950	0.933	0.916	0.898	
1.073	1.063	1.052	1.040	1.028	1.015	1.001	0.986	0.971	0.956	0.939	0.922	0.905		
1.063	1.053	1.042	1.030	1.018	1.005	0.991	0.976	0.961	0.945	0.928	0.911			
1.053	1.043	1.032	1.020	1.008	0.994	0.980	0.965	0.950	0.934	0.916				
1.043	1.033	1.022	1.010	0.997	0.984	0.969	0.954	0.938	0.922					
1.033	1.023	1.012	1.000	0.987	0.973	0.958	0.943	0.926						
1.023	1.013	1.001	0.989	0.976	0.962	0.946	0.930							

Table B11A-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11A-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.9844E+15	2.2273E+15
SE	1.9276E+15	2.3130E+15
SW	1.9732E+15	2.1096E+15
W	2.0858E+15	1.8996E+15
NW	2.1514E+15	1.8664E+15
NE	2.0586E+15	2.0465E+15

Table B11A-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 11A-1

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1404	1066	113570
1303	981	68360
1304	916	205640
1403	858	205660
1405	886	205660
1505	893	195550
1506	887	205640
2506	1059	113570
2404	1055	202240
2405	882	205660
2505	898	205640
2507	899	205640
2606	937	168640
2607	917	161730

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.67E+06 lb/hr.

...

Table B11A-1.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 11A-1

temperature map for condition 51	ASSEMBLY NO. 2506	MFA-2
axial height	935	
	936	
	937	
	938	
	939	
	940	
	941	
	942	
	943	
	944	
	945	
	946	
	947	
	948	
	949	
	950	
	951	
	952	
	953	
	954	
	955	
	956	
	957	
	958	
	959	
	960	
	961	
	962	
	963	
	964	
	965	
	966	
	967	
	968	
	969	
	970	
	971	
	972	
	973	
	974	
	975	
	976	
	977	
	978	
	979	
	980	
	981	
	982	
	983	
	984	
	985	
	986	
	987	
	988	
	989	
	990	
	991	
	992	
	993	
	994	
	995	
	996	
	997	
	998	
	999	
	1000	

Table B11A-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 11A-1

1	Temperature map for bundle 23	ASSEMBLY NO. 1484	MFA-1	
	axial height			
895	56.588 in	984 989 911 913 914 914 914	893	
		931		
		939 944 946 947 947 946 945	938	
		956 973 976 979 979 977 976 977		
914 940		1087 1023 1028 1030 1030 1028 1016		
		965 1084 1037 1040 1052 1053 1045 1019 985	946 985	
916 942		967 1010 1063 1095 1096 1099 1101 1099 1083 1037 990	951 910	
		1094 1070 1082 1086 1088 1088 1081 1051		
		1044 1088 1105 1111 1114 1116 1115 1105 1063		
916 944		970 1023 1079 1104 1113 1117 1120 1121 1117 1086 1043 992	953 912	
		1047 1093 1112 1119 1123 1126 1127 1125 1111 1067		
917 945		973 1025 1062 1109 1119 1123 1126 1129 1129 1124 1102 1046 993	954 914	
		1049 1095 1115 1122 1126 1129 1132 1133 1130 1115 1078		
916 946		975 1026 1084 1111 1121 1126 1129 1132 1134 1120 1105 1046 992	954 915	
		1040 1096 1116 1124 1128 1131 1134 1136 1137 1134 1118 1078		
914 945		975 1024 1063 1111 1122 1127 1131 1133 1136 1130 1130 1131 1106 1044 999	953 915	
		1040 1093 1116 1125 1129 1132 1135 1138 1140 1140 1136 1116 1063		
910 941		972 1089 1074 1109 1122 1128 1132 1135 1137 1139 1141 1140 1131 1039 1031	980	952 915
885 926		965	983	946 991
893 929		965	983	968 922
		1040 1095 1119 1120 1132 1135 1130 1141 1143 1143 1139 1120 1067		
895 932		968 1023 1087 1117 1128 1133 1137 1139 1142 1144 1137 1112 1052 1001	964 925	
		1051 1102 1123 1131 1135 1136 1141 1143 1144 1141 1125 1078		
897 935		972 1029 1092 1121 1131 1136 1139 1142 1144 1144 1139 1115 1056 1002	965 927	
		1056 1106 1127 1134 1138 1141 1143 1145 1142 1126 1000		
899 938		976 1033 1095 1123 1133 1138 1141 1143 1144 1130 1115 1056 1000	965 928	
		1059 1109 1120 1135 1139 1141 1143 1141 1126 1079		
901 940		979 1036 1096 1122 1131 1135 1138 1139 1135 1113 1054 998	963 928	
		1068 1107 1124 1130 1133 1135 1134 1121 1077		
901 942		981 1035 1089 1109 1116 1120 1122 1120 1103 1050 995	962 927	
		1053 1090 1102 1107 1110 1110 1103 1069		
900 940		979 1021 1055 1067 1072 1075 1075 1069 1035 993	960 926	
		1021 1030 1046 1050 1053 1052 1037		
		975 978 985 991 996 1000 1002 1000 994		
949		972 978 982 985 988 989 987	967	
922		966 970 973 975 976 975 973	939	

Table B11A-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 11A-1

[illegible]

Table B11A-1.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 11A-1

1	temperature map for bundle 23	ASSEMBLY NO. 1484	MFA-1	
axial height	92.000 in	920		
		928	931 934 936 937 938 939	918
		956	985 988 978 971 972 972 972	962
			996 1001 1004 1006 1006 1006 1005 1005 1006	
		940 960	1011 1021 1026 1028 1028 1025 1019	
			1022 1042 1055 1061 1063 1068 1052 1036	
		948 968	1015 1041 1059 1069 1073 1072 1067 1054 1033 1015	974 932
			1029 1057 1076 1087 1091 1091 1085 1071 1047	
		939 968	1028 1052 1076 1098 1097 1099 1097 1067 1038 1017	976 935
			1033 1065 1089 1102 1109 1111 1110 1101 1081 1051	
		937 960	1022 1057 1084 1102 1111 1115 1116 1111 1090 1074 1041 1017	977 937
			1034 1069 1084 1110 1118 1123 1123 1120 1100 1086 1053	
		935 960	1022 1059 1088 1107 1110 1124 1126 1126 1119 1104 1076 1040 1016	970 930
			1032 1067 1095 1113 1123 1128 1130 1130 1125 1112 1086 1051	
		932 966	1010 1054 1086 1100 1121 1127 1131 1132 1131 1123 1104 1074 1037 1015	978 939
			1024 1060 1091 1112 1124 1130 1133 1135 1134 1127 1110 1081 1045	
		928 963	1009 1043 1078 1104 1120 1128 1133 1135 1136 1132 1121 1099 1065 1031 1015	970 940
		988 950	1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091	972 942
		921 956	1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091 1091	974 947
			1022 1060 1093 1115 1126 1133 1136 1136 1137 1130 1112 1083 1048	
		921 957	1015 1055 1090 1113 1126 1133 1136 1136 1137 1132 1110 1070 1044 1024	967 949
			1031 1078 1101 1120 1130 1135 1137 1132 1110 1062 1050	
		923 959	1021 1062 1095 1116 1128 1133 1136 1135 1129 1112 1084 1048 1025	989 951
			1036 1075 1104 1121 1129 1134 1135 1131 1119 1095 1061	
		924 960	1024 1065 1095 1114 1124 1129 1129 1124 1110 1084 1049 1024	989 953
			1039 1076 1102 1116 1123 1126 1124 1114 1093 1061	
		924 962	998 1025 1063 1080 1105 1113 1115 1113 1102 1079 1047 1023	988 953
			1039 1078 1091 1102 1100 1100 1102 1095 1057	
		924 962	1023 1053 1073 1084 1090 1090 1084 1069 1043 1021	988 953
			1031 1055 1069 1077 1080 1070 1069 1049	
		923 961	998 1015 1034 1046 1053 1057 1057 1059 1035 1020	987 954
			1017 1023 1037 1043 1045 1044 1037	
			996 1000 1005 1011 1017 1021 1024 1024 1021	
		971	994 998 1002 1006 1008 1009 1008	992
		946	989 991 993 994 995 994 992	963

Table B11A-1.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 11A-1

temperature map for bundle 51	ASSEMBLY NO. 2586	MFA-2
axial height 92.888 in		
979	948 948 947 946 944 942 941	935
991	976 976 974 972 970 968 967	964
	1002 1002 1002 1001 990 996 993 991 992	
	1018 1024 1025 1024 1020 1014 1005	
1021 1014	1006 1020 1032 1037 1037 1034 1020 1019 1007 995	974 951
	1036 1053 1060 1061 1058 1051 1030 1020	
1024 1018	1012 1032 1055 1060 1072 1071 1065 1055 1030 1014 997	976 955
	1040 1072 1086 1090 1089 1083 1072 1053 1026	
1027 1022	1010 1069 1080 1096 1097 1093 1005 1070 1047 1016 996	977 957
	1056 1083 1101 1100 1100 1104 1096 1081 1050 1027	
1020 1026	1024 1047 1077 1099 1110 1113 1110 1104 1094 1076 1049 1015 995	977 950
	1060 1089 1109 1118 1118 1115 1109 1100 1083 1050 1025	
1030 1029	1029 1050 1081 1105 1110 1121 1119 1114 1107 1095 1075 1046 1012 993	976 959
	1060 1090 1112 1122 1124 1121 1116 1109 1090 1080 1053 1020	
1030 1031	1032 1049 1080 1106 1121 1125 1124 1119 1114 1105 1092 1070 1040 1000 992	975 959
	1055 1085 1110 1123 1127 1124 1120 1114 1106 1094 1074 1045 1013	
1029 1031	1033 1042 1071 1100 1119 1126 1126 1122 1117 1111 1101 1086 1061 1030 1002 991	975 959
977 1004	1029	991 966 940
941 985	1027 1040 1070 1100 1119 1126 1126 1122 1117 1110 1101 1086 1061 1031 1003 995	969 942
	1052 1084 1110 1123 1126 1124 1120 1114 1106 1094 1074 1046 1015	
940 983	1026 1045 1070 1105 1120 1125 1123 1119 1113 1105 1091 1071 1042 1012 998	971 945
	1057 1089 1111 1122 1123 1120 1115 1108 1097 1080 1054 1023	
939 992	1025 1047 1080 1104 1117 1120 1118 1113 1105 1094 1075 1047 1016 999	973 947
	1050 1080 1100 1117 1117 1114 1100 1090 1002 1050 1027	
937 981	1025 1046 1077 1099 1109 1111 1109 1102 1092 1075 1049 1018 999	974 948
	1056 1084 1100 1107 1107 1102 1094 1080 1050 1020	
935 980	1023 1044 1070 1088 1095 1096 1092 1084 1069 1046 1010 999	975 950
	1051 1073 1095 1089 1080 1082 1071 1053 1026	
933 977	1021 1037 1057 1060 1072 1071 1066 1056 1039 1015 990	975 951
	1040 1054 1061 1063 1060 1053 1041 1021	
930 974	1016 1027 1036 1040 1041 1040 1035 1025 1010 990	975 951
	1024 1020 1030 1030 1020 1022 1012	
	1011 1010 1009 1010 1010 1009 1007 1003 999	
	977 977 976 975 974 971 968	964
921	944 943 942 940 930 935 932	920

Table E11A-1.17. Composition of MFA-1 at EOC 11A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1443E-05
			U-238	7.0573E-03	6.9115E-03
			Pu-239	0.0000E+00	1.2528E-04
			Pu-240	0.0000E+00	3.7604E-06
			FP	0.0000E+00	1.8643E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	8.9775E-06
			U-238	4.4499E-03	4.3400E-03
			Pu-239	1.7520E-03	1.5398E-03
			Pu-240	2.2340E-04	2.6346E-04
			Pu-241	1.9280E-05	2.2098E-05
			Pu-242	4.7430E-06	4.9950E-06
			Am-241	7.6680E-07	1.9866E-06
			FP	0.0000E+00	2.7877E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	8.5737E-06
			U-238	4.4499E-03	4.3113E-03
			Pu-239	1.7520E-03	1.4861E-03
			Pu-240	2.2340E-04	2.6588E-04
			Pu-241	1.9280E-05	2.2286E-05
			Pu-242	4.7430E-06	4.9976E-06
			Am-241	7.6680E-07	1.9536E-06
			FP	0.0000E+00	3.5896E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	8.3537E-06
			U-238	4.4499E-03	4.2961E-03
			Pu-239	1.7520E-03	1.4595E-03
			Pu-240	2.2340E-04	2.6936E-04
			Pu-241	1.9280E-05	2.2735E-05
			Pu-242	4.7430E-06	5.0297E-06
			Am-241	7.6680E-07	1.9464E-06
			FP	0.0000E+00	3.9678E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	8.4260E-06
			U-238	4.4499E-03	4.3011E-03
			Pu-239	1.7520E-03	1.4679E-03
			Pu-240	2.2340E-04	2.6797E-04
			Pu-241	1.9280E-05	2.2556E-05
			Pu-242	4.7430E-06	5.0164E-06
			Am-241	7.6680E-07	1.9489E-06
			FP	0.0000E+00	3.8482E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	8.7772E-06
			U-238	4.4499E-03	4.3248E-03
			Pu-239	1.7520E-03	1.5097E-03
			Pu-240	2.2340E-04	2.6191E-04
			Pu-241	1.9280E-05	2.1797E-05
			Pu-242	4.7430E-06	4.9631E-06
			Am-241	7.6680E-07	1.9604E-06
			FP	0.0000E+00	3.2626E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	9.2848E-06
			U-238	4.4499E-03	4.3592E-03
			Pu-239	1.7520E-03	1.5740E-03
			Pu-240	2.2340E-04	2.5610E-04
			Pu-241	1.9280E-05	2.1192E-05
			Pu-242	4.7430E-06	4.9317E-06
			Am-241	7.6680E-07	1.9908E-06
			FP	0.0000E+00	2.3354E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2284E-05
			U-238	7.0573E-03	6.9558E-03
			Pu-239	0.0000E+00	8.9044E-05
			Pu-240	0.0000E+00	1.6979E-06
			FP	0.0000E+00	1.2085E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11A-1.18. Composition of MFA-2 at EOC 11A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1346E-05
			U-238	7.0573E-03	6.9069E-03
			Pu-239	0.0000E+00	1.2877E-04
			Pu-240	0.0000E+00	4.0661E-06
			FP	0.0000E+00	1.9589E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	8.3228E-06
			U-238	4.4270E-03	4.3112E-03
			Pu-239	1.7483E-03	1.5261E-03
			Pu-240	2.2290E-04	2.6565E-04
			Pu-241	1.9040E-05	2.2262E-05
			Pu-242	4.7330E-06	5.0041E-06
			Am-241	7.5700E-07	1.9625E-06
			FP	0.0000E+00	2.9157E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	7.9069E-06
			U-238	4.4270E-03	4.2792E-03
			Pu-239	1.7483E-03	1.4677E-03
			Pu-240	2.2290E-04	2.6861E-04
			Pu-241	1.9040E-05	2.2529E-05
			Pu-242	4.7330E-06	5.0113E-06
			Am-241	7.5700E-07	1.9274E-06
			FP	0.0000E+00	3.7900E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	7.6750E-06
			U-238	4.4270E-03	4.2620E-03
			Pu-239	1.7483E-03	1.4381E-03
			Pu-240	2.2290E-04	2.7257E-04
			Pu-241	1.9040E-05	2.3072E-05
			Pu-242	4.7330E-06	5.0505E-06
			Am-241	7.5700E-07	1.9194E-06
			FP	0.0000E+00	4.2145E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	7.7370E-06
			U-238	4.4270E-03	4.2666E-03
			Pu-239	1.7483E-03	1.4456E-03
			Pu-240	2.2290E-04	2.7134E-04
			Pu-241	1.9040E-05	2.2901E-05
			Pu-242	4.7330E-06	5.0376E-06
			Am-241	7.5700E-07	1.9215E-06
			FP	0.0000E+00	4.1054E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	8.0748E-06
			U-238	4.4270E-03	4.2913E-03
			Pu-239	1.7483E-03	1.4885E-03
			Pu-240	2.2290E-04	2.6517E-04
			Pu-241	1.9040E-05	2.2088E-05
			Pu-242	4.7330E-06	4.9800E-06
			Am-241	7.5700E-07	1.9328E-06
			FP	0.0000E+00	3.5000E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	8.5755E-06
			U-238	4.4270E-03	4.3280E-03
			Pu-239	1.7483E-03	1.5559E-03
			Pu-240	2.2290E-04	2.5921E-04
			Pu-241	1.9040E-05	2.1437E-05
			Pu-242	4.7330E-06	4.9463E-06
			Am-241	7.5700E-07	1.9650E-06
			FP	0.0000E+00	2.5211E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2081E-05
			U-238	7.0573E-03	6.9459E-03
			Pu-239	0.0000E+00	9.7223E-05
			Pu-240	0.0000E+00	2.1254E-06
			FP	0.0000E+00	1.3579E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.9 Cycle 11A-2

Table B11A-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11A-2

CORE POS.	* * * * *	POWER IN CORE	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1404	6.257E-02	4.130E+00	3.495E-02	4.228E+00
1303	1.427E-01	1.778E+00	6.596E-02	1.987E+00
1304	9.757E-03	4.480E+00	7.084E-03	4.497E+00
1403	1.408E-02	3.388E+00	7.411E-03	3.409E+00
1405	7.304E-03	3.845E+00	5.647E-03	3.858E+00
1505	6.530E-03	3.940E+00	4.374E-03	3.951E+00
1506	8.972E-03	3.921E+00	6.327E-03	3.936E+00
2506	6.135E-02	3.908E+00	3.862E-02	4.008E+00
2404	0.000E+00	7.226E+00	0.000E+00	7.226E+00
2505	1.310E-02	4.113E+00	6.986E-03	4.133E+00
2405	1.435E-02	3.674E+00	1.005E-02	3.698E+00
2606	6.243E-03	3.979E+00	4.798E-03	3.990E+00
2607	1.349E-02	3.443E+00	7.765E-03	3.464E+00
2507	9.545E-03	4.056E+00	7.291E-03	4.073E+00

Table B11A-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11A-2

Assembly	Core Pos.	Flux (n/cm ² -sec)
		Total > 0.1 MeV
MFA-1	1404	3.372E+15
MFA-2	2506	3.239E+15

Table B11A-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8883E-02	1.5414E-02	0.0000E+00
-92.78	6.1995E-02	2.9706E-02	0.0000E+00
-87.78	9.9294E-02	4.7418E-02	0.0000E+00
-82.78	1.4354E-01	7.0510E-02	0.0000E+00
-77.78	1.9750E-01	1.0138E-01	0.0000E+00
-72.15	2.5833E-01	1.4105E-01	0.0000E+00
-65.90	3.1899E-01	1.9040E-01	0.0000E+00
-60.35	3.8210E-01	2.5593E-01	6.6848E-02
-55.49	4.6462E-01	3.4136E-01	7.8429E-02
-50.62	5.5953E-01	4.5056E-01	9.4837E-02
-47.17	6.3493E-01	5.5251E-01	1.1240E-01
-43.58	7.1413E-01	6.6863E-01	7.7002E-01
-38.45	8.2853E-01	8.0963E-01	8.6054E-01
-33.32	9.3487E-01	9.3040E-01	9.5983E-01
-28.20	1.0279E+00	1.0311E+00	1.0186E+00
-23.07	1.1058E+00	1.1135E+00	1.0936E+00
-17.94	1.1666E+00	1.1767E+00	1.1525E+00
-12.82	1.2091E+00	1.2202E+00	1.1759E+00
-7.69	1.2332E+00	1.2447E+00	1.1989E+00
-2.56	1.2383E+00	1.2500E+00	1.2036E+00
2.56	1.2243E+00	1.2360E+00	1.1956E+00
7.69	1.1914E+00	1.2027E+00	1.1633E+00
12.82	1.1403E+00	1.1510E+00	1.1134E+00
17.94	1.0727E+00	1.0827E+00	1.0723E+00
23.07	9.9016E-01	9.9817E-01	9.9025E-01
28.20	8.9510E-01	8.9963E-01	8.9616E-01
33.32	7.8996E-01	7.8893E-01	8.2206E-01
38.45	6.7692E-01	6.6545E-01	7.0977E-01
43.58	5.6076E-01	5.3057E-01	6.0355E-01
47.17	4.8226E-01	4.2705E-01	7.3145E-02
50.62	4.0821E-01	3.3649E-01	5.7010E-02
55.49	3.1676E-01	2.4099E-01	4.1822E-02
60.35	2.3788E-01	1.6766E-01	3.0891E-02
64.98	1.8907E-01	1.2539E-01	0.0000E+00
69.39	1.6095E-01	1.0315E-01	0.0000E+00
76.46	1.2151E-01	7.3336E-02	0.0000E+00
86.80	7.8859E-02	4.4308E-02	0.0000E+00
98.14	4.5387E-02	2.4236E-02	0.0000E+00
110.00	1.9456E-02	1.0840E-02	0.0000E+00

Table B11A-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6242E-02	1.3319E-02	0.0000E+00
-92.78	5.6314E-02	2.5716E-02	0.0000E+00
-87.78	9.0297E-02	4.1175E-02	0.0000E+00
-82.78	1.3087E-01	6.1499E-02	0.0000E+00
-77.78	1.8097E-01	8.8964E-02	0.0000E+00
-72.15	2.3880E-01	1.2489E-01	0.0000E+00
-65.90	2.9874E-01	1.7143E-01	0.0000E+00
-60.35	3.6287E-01	2.3544E-01	6.8538E-02
-55.49	4.4602E-01	3.2032E-01	8.1136E-02
-50.62	5.4184E-01	4.3129E-01	9.8654E-02
-47.17	6.1840E-01	5.3605E-01	1.1751E-01
-43.58	6.9900E-01	6.5459E-01	7.5837E-01
-38.45	8.1648E-01	7.9894E-01	8.4908E-01
-33.32	9.2555E-01	9.2180E-01	9.5151E-01
-28.20	1.0206E+00	1.0234E+00	1.0106E+00
-23.07	1.0999E+00	1.1064E+00	1.0874E+00
-17.94	1.1617E+00	1.1700E+00	1.1476E+00
-12.82	1.2052E+00	1.2138E+00	1.1701E+00
-7.69	1.2303E+00	1.2393E+00	1.1941E+00
-2.56	1.2367E+00	1.2461E+00	1.2003E+00
2.56	1.2245E+00	1.2345E+00	1.1934E+00
7.69	1.1937E+00	1.2040E+00	1.1635E+00
12.82	1.1451E+00	1.1557E+00	1.1162E+00
17.94	1.0801E+00	1.0911E+00	1.0789E+00
23.07	9.9958E-01	1.0094E+00	9.9902E-01
28.20	9.0559E-01	9.1260E-01	9.0614E-01
33.32	8.0062E-01	8.0233E-01	8.3426E-01
38.45	6.8654E-01	6.7723E-01	7.2167E-01
43.58	5.6885E-01	5.3875E-01	6.1781E-01
47.17	4.9122E-01	4.3364E-01	8.2952E-02
50.62	4.1956E-01	3.4299E-01	6.5606E-02
55.49	3.3157E-01	2.4809E-01	4.9392E-02
60.35	2.5389E-01	1.7448E-01	3.7529E-02
64.98	2.0347E-01	1.3000E-01	0.0000E+00
69.39	1.7288E-01	1.0580E-01	0.0000E+00
76.46	1.2951E-01	7.3599E-02	0.0000E+00
86.80	8.3055E-02	4.3336E-02	0.0000E+00
98.14	4.7184E-02	2.3173E-02	0.0000E+00
110.00	1.9993E-02	1.0192E-02	0.0000E+00

Table B11A-2.5. Fission Power Distribution by Pin in MFA-1 at BOC 11A-2

CORE POSITION 1404

0.936	0.943	0.949	0.955	0.960	0.965	0.969	0.974								
0.940	0.947	0.953	0.959	0.965	0.970	0.975	0.979	0.983							
0.944	0.951	0.958	0.964	0.970	0.975	0.980	0.985	0.989	0.992						
0.948	0.955	0.962	0.968	0.974	0.979	0.985	0.989	0.994	0.998	1.001					
0.951	0.958	0.965	0.972	0.978	0.983	0.989	0.994	0.998	1.003	1.006	1.010				
0.953	0.961	0.968	0.975	0.981	0.987	0.993	0.998	1.003	1.007	1.011	1.015	1.018			
0.956	0.963	0.971	0.978	0.984	0.990	0.996	1.001	1.006	1.011	1.015	1.019	1.023	1.026		
0.958	0.965	0.973	0.980	0.987	0.993	0.999	1.004	1.010	1.014	1.019	1.023	1.027	1.031	1.034	
0.967	0.975	0.982	0.989	0.995	1.001	1.007	1.013	1.018	1.022	1.027	1.031	1.035	1.038		
0.976	0.984	0.991	0.997	1.004	1.009	1.015	1.020	1.025	1.030	1.034	1.038	1.042			
0.985	0.992	0.999	1.005	1.011	1.017	1.023	1.028	1.033	1.037	1.041	1.045				
0.994	1.000	1.007	1.013	1.019	1.024	1.030	1.035	1.040	1.044	1.048					
1.001	1.008	1.014	1.020	1.026	1.031	1.037	1.042	1.046	1.051						
1.009	1.015	1.021	1.027	1.033	1.038	1.043	1.048	1.053							
1.016	1.022	1.028	1.034	1.039	1.045	1.050	1.055								

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Table B11A-2.6. Fission Power Distribution by Pin in MFA-2 at BOC 11A-2

CORE POSITION 2506

	1.037	1.029	1.020	1.010	1.000	0.989	0.976	0.964						
	1.043	1.035	1.026	1.017	1.006	0.995	0.983	0.971	0.958					
	1.049	1.041	1.032	1.023	1.013	1.002	0.990	0.978	0.965	0.951				
	1.054	1.046	1.038	1.028	1.018	1.008	0.996	0.984	0.971	0.958	0.944			
	1.059	1.051	1.043	1.034	1.024	1.013	1.002	0.990	0.977	0.964	0.950	0.936		
	1.064	1.056	1.048	1.039	1.029	1.019	1.008	0.996	0.983	0.970	0.956	0.942	0.928	
	1.068	1.061	1.053	1.044	1.034	1.024	1.013	1.001	0.989	0.976	0.962	0.948	0.934	0.919
1.073	1.065	1.057	1.048	1.039	1.029	1.018	1.006	0.994	0.981	0.968	0.954	0.940	0.925	0.910
	1.069	1.061	1.052	1.043	1.033	1.022	1.011	0.999	0.987	0.973	0.960	0.945	0.931	0.916
	1.065	1.056	1.047	1.037	1.027	1.015	1.004	0.991	0.978	0.965	0.951	0.936	0.921	
	1.059	1.050	1.041	1.030	1.019	1.008	0.996	0.983	0.970	0.956	0.941	0.927		
	1.053	1.044	1.034	1.023	1.012	1.000	0.987	0.974	0.960	0.946	0.932			
	1.046	1.036	1.026	1.015	1.003	0.991	0.978	0.965	0.951	0.937				
	1.039	1.028	1.018	1.006	0.994	0.982	0.969	0.955	0.941					
	1.031	1.020	1.009	0.997	0.985	0.972	0.959	0.945						

Table B11A-2.7. Fast Flux Distribution by Pin in MFA-1 at BOC 11A-2

CORE POSITION 1404

[illegible]

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Table B11A-2.8. Fast Flux Distribution by Pin in MFA-2 at BOC 11A-2

CORE POSITION 2506

[illegible]

Table B11A-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11A-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.0016E+15	2.2460E+15
SE	1.9456E+15	2.3331E+15
SW	1.9927E+15	2.1292E+15
W	2.1063E+15	1.9175E+15
NW	2.1714E+15	1.8834E+15
NE	2.0767E+15	2.0641E+15

Table E11A-2.17. Composition of MFA-1 at EOC 11A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1368E-05
			U-238	7.0573E-03	6.9069E-03
			Pu-239	0.0000E+00	1.2888E-04
			Pu-240	0.0000E+00	3.9828E-06
			FP	0.0000E+00	1.9457E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	8.9222E-06
			U-238	4.4499E-03	4.3364E-03
			Pu-239	1.7520E-03	1.5337E-03
			Pu-240	2.2340E-04	2.6472E-04
			Pu-241	1.9280E-05	2.2217E-05
			Pu-242	4.7430E-06	5.0055E-06
			Am-241	7.6680E-07	2.0211E-06
			FP	0.0000E+00	2.8706E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	8.5082E-06
			U-238	4.4499E-03	4.3068E-03
			Pu-239	1.7520E-03	1.4787E-03
			Pu-240	2.2340E-04	2.6718E-04
			Pu-241	1.9280E-05	2.2417E-05
			Pu-242	4.7430E-06	5.0089E-06
			Am-241	7.6680E-07	1.9864E-06
			FP	0.0000E+00	3.6940E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	8.2829E-06
			U-238	4.4499E-03	4.2912E-03
			Pu-239	1.7520E-03	1.4514E-03
			Pu-240	2.2340E-04	2.7074E-04
			Pu-241	1.9280E-05	2.2883E-05
			Pu-242	4.7430E-06	5.0425E-06
			Am-241	7.6680E-07	1.9789E-06
			FP	0.0000E+00	4.0822E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	8.3570E-06
			U-238	4.4499E-03	4.2963E-03
			Pu-239	1.7520E-03	1.4601E-03
			Pu-240	2.2340E-04	2.6932E-04
			Pu-241	1.9280E-05	2.2697E-05
			Pu-242	4.7430E-06	5.0286E-06
			Am-241	7.6680E-07	1.9815E-06
			FP	0.0000E+00	3.9592E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	8.7173E-06
			U-238	4.4499E-03	4.3208E-03
			Pu-239	1.7520E-03	1.5029E-03
			Pu-240	2.2340E-04	2.6311E-04
			Pu-241	1.9280E-05	2.1908E-05
			Pu-242	4.7430E-06	4.9726E-06
			Am-241	7.6680E-07	1.9935E-06
			FP	0.0000E+00	3.3572E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	9.2390E-06
			U-238	4.4499E-03	4.3563E-03
			Pu-239	1.7520E-03	1.5689E-03
			Pu-240	2.2340E-04	2.5712E-04
			Pu-241	1.9280E-05	2.1272E-05
			Pu-242	4.7430E-06	4.9391E-06
			Am-241	7.6680E-07	2.0254E-06
			FP	0.0000E+00	2.4037E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2235E-05
			U-238	7.0573E-03	6.9528E-03
			Pu-239	0.0000E+00	9.1512E-05
			Pu-240	0.0000E+00	1.7911E-06
			FP	0.0000E+00	1.2539E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11A-2.18. Composition of MFA-2 at EOC 11A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.1274E-05
			U-238	7.0573E-03	6.9026E-03
			Pu-239	0.0000E+00	1.3208E-04
			Pu-240	0.0000E+00	4.2904E-06
			FP	0.0000E+00	2.0390E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	8.2764E-06
			U-238	4.4270E-03	4.3080E-03
			Pu-239	1.7483E-03	1.5204E-03
			Pu-240	2.2290E-04	2.6665E-04
			Pu-241	1.9040E-05	2.2356E-05
			Pu-242	4.7330E-06	5.0126E-06
			Am-241	7.5700E-07	1.9983E-06
			FP	0.0000E+00	2.9935E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	7.8520E-06
			U-238	4.4270E-03	4.2752E-03
			Pu-239	1.7483E-03	1.4607E-03
			Pu-240	2.2290E-04	2.6961E-04
			Pu-241	1.9040E-05	2.2627E-05
			Pu-242	4.7330E-06	5.0201E-06
			Am-241	7.5700E-07	1.9618E-06
			FP	0.0000E+00	3.8886E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	7.6157E-06
			U-238	4.4270E-03	4.2575E-03
			Pu-239	1.7483E-03	1.4305E-03
			Pu-240	2.2290E-04	2.7362E-04
			Pu-241	1.9040E-05	2.3185E-05
			Pu-242	4.7330E-06	5.0607E-06
			Am-241	7.5700E-07	1.9538E-06
			FP	0.0000E+00	4.3228E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	7.6790E-06
			U-238	4.4270E-03	4.2623E-03
			Pu-239	1.7483E-03	1.4382E-03
			Pu-240	2.2290E-04	2.7237E-04
			Pu-241	1.9040E-05	2.3008E-05
			Pu-242	4.7330E-06	5.0473E-06
			Am-241	7.5700E-07	1.9560E-06
			FP	0.0000E+00	4.2109E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	8.0241E-06
			U-238	4.4270E-03	4.2876E-03
			Pu-239	1.7483E-03	1.4821E-03
			Pu-240	2.2290E-04	2.6609E-04
			Pu-241	1.9040E-05	2.2172E-05
			Pu-242	4.7330E-06	4.9875E-06
			Am-241	7.5700E-07	1.9673E-06
			FP	0.0000E+00	3.5907E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	8.5361E-06
			U-238	4.4270E-03	4.3253E-03
			Pu-239	1.7483E-03	1.5510E-03
			Pu-240	2.2290E-04	2.6005E-04
			Pu-241	1.9040E-05	2.1501E-05
			Pu-242	4.7330E-06	4.9524E-06
			Am-241	7.5700E-07	2.0006E-06
			FP	0.0000E+00	2.5872E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.2030E-05
			U-238	7.0573E-03	6.9429E-03
			Pu-239	0.0000E+00	9.9658E-05
			Pu-240	0.0000E+00	2.2345E-06
			FP	0.0000E+00	1.4082E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.10 Cycle 11A-3

Table B11A-3.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11A-3

CORE POS.	* * * * *	POWER IN MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE
1404	6.355E-02	4.106E+00	3.539E-02
1303	1.438E-01	1.788E+00	6.652E-02
1304	9.915E-03	4.452E+00	7.178E-03
1403	1.422E-02	3.379E+00	7.473E-03
1405	7.439E-03	3.820E+00	5.723E-03
1505	6.651E-03	3.922E+00	4.426E-03
1506	9.053E-03	3.897E+00	6.377E-03
2506	6.199E-02	3.870E+00	3.885E-02
2404	0.000E+00	7.160E+00	0.000E+00
2505	1.314E-02	4.074E+00	7.002E-03
2405	1.444E-02	3.648E+00	1.010E-02
2606	6.318E-03	3.939E+00	4.819E-03
2607	1.111E-02	3.384E+00	7.128E-03
2507	9.606E-03	4.020E+00	7.310E-03
			4.037E+00

Table B11A-3.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11A-3

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1404	3.365E+15	2.075E+15
MFA-2	2506	3.220E+15	2.102E+15

Table B11A-3.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8927E-02	1.5450E-02	0.0000E+00
-92.78	6.2092E-02	2.9775E-02	0.0000E+00
-87.78	9.9443E-02	4.7526E-02	0.0000E+00
-82.78	1.4375E-01	7.0669E-02	0.0000E+00
-77.78	1.9777E-01	1.0160E-01	0.0000E+00
-72.15	2.5868E-01	1.4136E-01	0.0000E+00
-65.90	3.1937E-01	1.9080E-01	0.0000E+00
-60.35	3.8249E-01	2.5646E-01	6.8505E-02
-55.49	4.6501E-01	3.4194E-01	8.0215E-02
-50.62	5.5989E-01	4.5112E-01	9.6743E-02
-47.17	6.3522E-01	5.5300E-01	1.1436E-01
-43.58	7.1434E-01	6.6893E-01	7.7067E-01
-38.45	8.2859E-01	8.0977E-01	8.6118E-01
-33.32	9.3480E-01	9.3041E-01	9.6040E-01
-28.20	1.0277E+00	1.0309E+00	1.0182E+00
-23.07	1.1055E+00	1.1131E+00	1.0931E+00
-17.94	1.1662E+00	1.1762E+00	1.1519E+00
-12.82	1.2087E+00	1.2196E+00	1.1747E+00
-7.69	1.2327E+00	1.2441E+00	1.1976E+00
-2.56	1.2379E+00	1.2494E+00	1.2024E+00
2.56	1.2240E+00	1.2355E+00	1.1947E+00
7.69	1.1912E+00	1.2024E+00	1.1626E+00
12.82	1.1402E+00	1.1509E+00	1.1128E+00
17.94	1.0728E+00	1.0829E+00	1.0726E+00
23.07	9.9046E-01	9.9854E-01	9.9071E-01
28.20	8.9552E-01	9.0013E-01	8.9675E-01
33.32	7.9049E-01	7.8958E-01	8.2362E-01
38.45	6.7749E-01	6.6617E-01	7.1125E-01
43.58	5.6133E-01	5.3129E-01	6.0486E-01
47.17	4.8280E-01	4.2771E-01	7.4251E-02
50.62	4.0870E-01	3.3709E-01	5.8004E-02
55.49	3.1720E-01	2.4149E-01	4.2652E-02
60.35	2.3824E-01	1.6805E-01	3.1568E-02
64.98	1.8938E-01	1.2568E-01	0.0000E+00
69.39	1.6122E-01	1.0340E-01	0.0000E+00
76.46	1.2172E-01	7.3516E-02	0.0000E+00
86.80	7.8996E-02	4.4418E-02	0.0000E+00
98.14	4.5465E-02	2.4295E-02	0.0000E+00
110.00	1.9489E-02	1.0866E-02	0.0000E+00

Table B11A-3.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6321E-02	1.3370E-02	0.0000E+00
-92.78	5.6484E-02	2.5814E-02	0.0000E+00
-87.78	9.0567E-02	4.1328E-02	0.0000E+00
-82.78	1.3125E-01	6.1720E-02	0.0000E+00
-77.78	1.8147E-01	8.9272E-02	0.0000E+00
-72.15	2.3944E-01	1.2530E-01	0.0000E+00
-65.90	2.9947E-01	1.7195E-01	0.0000E+00
-60.35	3.6362E-01	2.3611E-01	7.0187E-02
-55.49	4.4681E-01	3.2108E-01	8.2905E-02
-50.62	5.4263E-01	4.3210E-01	1.0051E-01
-47.17	6.1921E-01	5.3690E-01	1.1940E-01
-43.58	6.9980E-01	6.5545E-01	7.5984E-01
-38.45	8.1725E-01	7.9988E-01	8.5052E-01
-33.32	9.2627E-01	9.2273E-01	9.5291E-01
-28.20	1.0212E+00	1.0242E+00	1.0110E+00
-23.07	1.1004E+00	1.1070E+00	1.0876E+00
-17.94	1.1621E+00	1.1704E+00	1.1477E+00
-12.82	1.2054E+00	1.2141E+00	1.1695E+00
-7.69	1.2303E+00	1.2394E+00	1.1934E+00
-2.56	1.2366E+00	1.2460E+00	1.1993E+00
2.56	1.2242E+00	1.2341E+00	1.1925E+00
7.69	1.1933E+00	1.2034E+00	1.1624E+00
12.82	1.1445E+00	1.1550E+00	1.1151E+00
17.94	1.0795E+00	1.0903E+00	1.0784E+00
23.07	9.9904E-01	1.0087E+00	9.9858E-01
28.20	9.0509E-01	9.1196E-01	9.0577E-01
33.32	8.0020E-01	8.0184E-01	8.3479E-01
38.45	6.8627E-01	6.7689E-01	7.2225E-01
43.58	5.6872E-01	5.3859E-01	6.1847E-01
47.17	4.9122E-01	4.3361E-01	8.3922E-02
50.62	4.1967E-01	3.4308E-01	6.6549E-02
55.49	3.3178E-01	2.4828E-01	5.0253E-02
60.35	2.5414E-01	1.7471E-01	3.8277E-02
64.98	2.0374E-01	1.3021E-01	0.0000E+00
69.39	1.7314E-01	1.0600E-01	0.0000E+00
76.46	1.2975E-01	7.3766E-02	0.0000E+00
86.80	8.3229E-02	4.3450E-02	0.0000E+00
98.14	4.7291E-02	2.3241E-02	0.0000E+00
110.00	2.0039E-02	1.0223E-02	0.0000E+00

Table B11A-3.5. Fission Power Distribution by Pin in MFA-1 at BOC 11A-3

CORE POSITION 1404

[illegible]

Table B11A-3.6. Fission Power Distribution by Pin in MFA-2 at BOC 11A-3

CORE POSITION 2506

	1.038	1.029	1.020	1.010	1.000	0.988	0.976	0.963						
	1.043	1.035	1.026	1.017	1.006	0.995	0.983	0.971	0.957					
	1.049	1.041	1.032	1.023	1.013	1.002	0.990	0.977	0.964	0.951				
	1.054	1.046	1.038	1.028	1.018	1.008	0.996	0.984	0.971	0.957	0.943			
	1.059	1.052	1.043	1.034	1.024	1.013	1.002	0.990	0.977	0.964	0.950	0.935		
	1.064	1.057	1.048	1.039	1.029	1.019	1.008	0.996	0.983	0.970	0.956	0.942	0.927	
	1.069	1.061	1.053	1.044	1.034	1.024	1.013	1.001	0.989	0.976	0.962	0.948	0.933	0.918
1.074	1.066	1.057	1.049	1.039	1.029	1.018	1.006	0.994	0.981	0.968	0.954	0.939	0.925	0.910
	1.070	1.062	1.053	1.043	1.033	1.023	1.011	0.999	0.986	0.973	0.959	0.945	0.930	0.915
	1.065	1.057	1.047	1.037	1.027	1.016	1.004	0.991	0.978	0.964	0.950	0.936	0.921	
	1.060	1.051	1.041	1.031	1.020	1.008	0.996	0.983	0.969	0.955	0.941	0.926		
	1.054	1.044	1.034	1.023	1.012	1.000	0.987	0.974	0.960	0.946	0.932			
	1.047	1.037	1.026	1.015	1.003	0.991	0.978	0.965	0.951	0.936				
	1.039	1.029	1.018	1.006	0.994	0.982	0.968	0.955	0.941					
	1.031	1.020	1.009	0.997	0.985	0.972	0.959	0.945						

Table B11A-3.8. Fast Flux Distribution by Pin in MFA-2 at BOC 11A-3

CORE POSITION 2506

	1.067	1.052	1.036	1.019	1.003	0.987	0.970	0.953						
	1.075	1.060	1.044	1.028	1.012	0.996	0.980	0.963	0.946					
	1.081	1.066	1.051	1.036	1.020	1.004	0.988	0.972	0.955	0.938				
	1.086	1.072	1.058	1.043	1.028	1.012	0.996	0.980	0.964	0.947	0.930			
	1.090	1.077	1.063	1.049	1.034	1.019	1.003	0.988	0.972	0.955	0.938	0.921		
	1.093	1.080	1.067	1.053	1.039	1.025	1.010	0.995	0.979	0.963	0.946	0.929	0.911	
	1.095	1.083	1.070	1.057	1.044	1.030	1.016	1.001	0.985	0.970	0.953	0.936	0.919	0.901
1.095	1.084	1.072	1.060	1.048	1.034	1.020	1.006	0.991	0.976	0.960	0.943	0.926	0.909	0.890
	1.084	1.074	1.062	1.050	1.038	1.024	1.011	0.996	0.981	0.966	0.950	0.933	0.915	0.897
	1.074	1.063	1.052	1.040	1.028	1.015	1.001	0.986	0.971	0.955	0.939	0.922	0.904	
	1.063	1.053	1.042	1.030	1.018	1.004	0.991	0.976	0.961	0.944	0.928	0.910		
-	1.053	1.043	1.032	1.020	1.008	0.994	0.980	0.965	0.949	0.933	0.916			
	1.043	1.033	1.022	1.010	0.997	0.984	0.969	0.954	0.938	0.921				
	1.033	1.023	1.012	0.999	0.986	0.973	0.958	0.942	0.926					
	1.023	1.013	1.001	0.989	0.975	0.961	0.946	0.930						

Table B11A-3.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11A-3

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	1.9985E+15	2.2320E+15
SE	1.9412E+15	2.3183E+15
SW	1.9866E+15	2.1142E+15
W	2.0993E+15	1.9028E+15
NW	2.1652E+15	1.8682E+15
NE	2.0733E+15	2.0498E+15

Table E11A-3.1. Fission Power Generated in MFA-1, MFA-2
and Neighboring Assemblies at EOC 11A-3

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE		TOTAL PWR
1404	6.997E-02	4.035E+00	4.503E-02		4.150E+00
1303	1.477E-01	1.902E+00	7.998E-02		2.130E+00
1304	1.101E-02	4.343E+00	8.932E-03		4.363E+00
1403	1.479E-02	3.420E+00	9.595E-03		3.445E+00
1405	8.456E-03	3.759E+00	7.221E-03		3.774E+00
1505	7.502E-03	3.980E+00	5.934E-03		3.994E+00
1506	9.575E-03	3.854E+00	7.807E-03		3.871E+00
2506	6.644E-02	3.738E+00	4.783E-02		3.852E+00
2404	0.000E+00	6.888E+00	0.000E+00		6.888E+00
2505	1.344E-02	4.050E+00	8.825E-03		4.072E+00
2405	1.477E-02	3.536E+00	1.183E-02		3.562E+00
2606	6.942E-03	3.875E+00	6.096E-03		3.888E+00
2607	1.114E-02	3.286E+00	8.301E-03		3.305E+00
2507	9.953E-03	3.867E+00	8.576E-03		3.885E+00

Table E11A-3.2. Assembly Averaged Total and Fast Flux
in MFA-1 and MFA-2 at EOC 11A-3

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1404	3.422E+15	2.096E+15
MFA-2	2506	3.213E+15	2.080E+15

Table E11A-3.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 11A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7358E-02	1.4721E-02	0.0000E+00
-92.78	5.8722E-02	2.8371E-02	0.0000E+00
-87.78	9.4054E-02	4.5290E-02	0.0000E+00
-82.78	1.3597E-01	6.7356E-02	0.0000E+00
-77.78	1.8709E-01	9.6861E-02	0.0000E+00
-72.15	2.4472E-01	1.3480E-01	0.0000E+00
-65.90	3.0217E-01	1.8208E-01	0.0000E+00
-60.35	3.6193E-01	2.4512E-01	7.8423E-02
-55.49	4.4013E-01	3.2639E-01	9.0639E-02
-50.62	5.3003E-01	4.2961E-01	1.0740E-01
-47.17	6.0130E-01	5.2549E-01	1.2466E-01
-43.58	6.7622E-01	6.3450E-01	7.3208E-01
-38.45	7.8525E-01	7.6814E-01	8.1969E-01
-33.32	8.8765E-01	8.8379E-01	9.1616E-01
-28.20	9.7867E-01	9.8148E-01	9.6651E-01
-23.07	1.0569E+00	1.0636E+00	1.0417E+00
-17.94	1.1204E+00	1.1292E+00	1.1032E+00
-12.82	1.1683E+00	1.1779E+00	1.1276E+00
-7.69	1.2004E+00	1.2105E+00	1.1582E+00
-2.56	1.2162E+00	1.2267E+00	1.1733E+00
2.56	1.2155E+00	1.2263E+00	1.1799E+00
7.69	1.1977E+00	1.2087E+00	1.1628E+00
12.82	1.1630E+00	1.1739E+00	1.1294E+00
17.94	1.1115E+00	1.1223E+00	1.1129E+00
23.07	1.0426E+00	1.0518E+00	1.0447E+00
28.20	9.5720E-01	9.6296E-01	9.6039E-01
33.32	8.5696E-01	8.5688E-01	9.0334E-01
38.45	7.4345E-01	7.3186E-01	7.8973E-01
43.58	6.2218E-01	5.8959E-01	6.7842E-01
47.17	5.3794E-01	4.7743E-01	9.2994E-02
50.62	4.5774E-01	3.7865E-01	7.4322E-02
55.49	3.5705E-01	2.7295E-01	5.5980E-02
60.35	2.6927E-01	1.9082E-01	4.2238E-02
64.98	2.1473E-01	1.4299E-01	0.0000E+00
69.39	1.8308E-01	1.1774E-01	0.0000E+00
76.46	1.3845E-01	8.3812E-02	0.0000E+00
86.80	8.9917E-02	5.0664E-02	0.0000E+00
98.14	5.1718E-02	2.7702E-02	0.0000E+00
110.00	2.2097E-02	1.2362E-02	0.0000E+00

Table E11A-3.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 11A-3

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5095E-02	1.2838E-02	0.0000E+00
-92.78	5.3859E-02	2.4782E-02	0.0000E+00
-87.78	8.6353E-02	3.9667E-02	0.0000E+00
-82.78	1.2514E-01	5.9224E-02	0.0000E+00
-77.78	1.7301E-01	8.5636E-02	0.0000E+00
-72.15	2.2825E-01	1.2017E-01	0.0000E+00
-65.90	2.8533E-01	1.6487E-01	0.0000E+00
-60.35	3.4614E-01	2.2650E-01	7.9755E-02
-55.49	4.2511E-01	3.0746E-01	9.2883E-02
-50.62	5.1602E-01	4.1280E-01	1.1043E-01
-47.17	5.8859E-01	5.1193E-01	1.2864E-01
-43.58	6.6499E-01	6.2398E-01	7.2531E-01
-38.45	7.7715E-01	7.6153E-01	8.1277E-01
-33.32	8.8227E-01	8.7954E-01	9.1217E-01
-28.20	9.7518E-01	9.7826E-01	9.6282E-01
-23.07	1.0546E+00	1.0608E+00	1.0396E+00
-17.94	1.1191E+00	1.1266E+00	1.1022E+00
-12.82	1.1675E+00	1.1752E+00	1.1255E+00
-7.69	1.2002E+00	1.2081E+00	1.1568E+00
-2.56	1.2168E+00	1.2251E+00	1.1726E+00
2.56	1.2169E+00	1.2259E+00	1.1791E+00
7.69	1.2000E+00	1.2097E+00	1.1630E+00
12.82	1.1662E+00	1.1766E+00	1.1305E+00
17.94	1.1156E+00	1.1269E+00	1.1153E+00
23.07	1.0472E+00	1.0577E+00	1.0477E+00
28.20	9.6192E-01	9.6974E-01	9.6368E-01
33.32	8.6151E-01	8.6398E-01	9.0804E-01
38.45	7.4733E-01	7.3769E-01	7.9489E-01
43.58	6.2552E-01	5.9267E-01	6.8795E-01
47.17	5.4343E-01	4.7990E-01	1.0321E-01
50.62	4.6703E-01	3.8215E-01	8.3803E-02
55.49	3.7155E-01	2.7847E-01	6.4955E-02
60.35	2.8630E-01	1.9716E-01	5.0556E-02
64.98	2.3072E-01	1.4754E-01	0.0000E+00
69.39	1.9664E-01	1.2041E-01	0.0000E+00
76.46	1.4792E-01	8.4113E-02	0.0000E+00
86.80	9.5175E-02	4.9717E-02	0.0000E+00
98.14	5.4147E-02	2.6645E-02	0.0000E+00
110.00	2.2909E-02	1.1716E-02	0.0000E+00

Table E11A-3.5. Fission Power Distribution by Pin in MFA-1 at EOC 11A-3

CORE POSITION 1404

	0.940	0.946	0.950	0.955	0.959	0.963	0.967	0.970						
	0.945	0.951	0.956	0.960	0.965	0.969	0.973	0.976	0.979					
	0.950	0.956	0.961	0.966	0.970	0.974	0.978	0.982	0.985	0.988				
	0.954	0.960	0.965	0.970	0.975	0.979	0.983	0.987	0.991	0.994	0.997			
	0.958	0.964	0.969	0.974	0.979	0.984	0.988	0.992	0.996	0.999	1.002	1.005		
	0.962	0.968	0.973	0.978	0.983	0.988	0.992	0.996	1.000	1.004	1.007	1.010	1.013	
	0.965	0.971	0.976	0.982	0.987	0.992	0.996	1.000	1.004	1.008	1.011	1.015	1.017	1.020
0.968	0.974	0.979	0.985	0.990	0.995	1.000	1.004	1.008	1.012	1.015	1.019	1.022	1.025	1.027
	0.976	0.982	0.988	0.993	0.998	1.003	1.007	1.011	1.015	1.019	1.023	1.026	1.029	1.032
	0.984	0.990	0.995	1.000	1.005	1.010	1.014	1.018	1.022	1.026	1.030	1.033	1.036	
	0.992	0.998	1.003	1.008	1.012	1.017	1.021	1.025	1.029	1.033	1.036	1.039		
	1.000	1.005	1.010	1.015	1.019	1.024	1.028	1.032	1.036	1.039	1.043			
	1.007	1.012	1.016	1.021	1.026	1.030	1.034	1.038	1.042	1.045				
	1.013	1.018	1.023	1.027	1.032	1.036	1.040	1.044	1.048					
	1.020	1.024	1.029	1.033	1.037	1.042	1.046	1.050						

Table E11A-3.6. Fission Power Distribution by Pin in MFA-2 at EOC 11A-3

CORE POSITION 2506

	1.043	1.035	1.026	1.016	1.006	0.995	0.983	0.971						
	1.047	1.039	1.031	1.021	1.011	1.001	0.989	0.977	0.964					
	1.051	1.044	1.035	1.026	1.016	1.006	0.994	0.982	0.969	0.956				
	1.056	1.048	1.040	1.031	1.021	1.011	0.999	0.987	0.975	0.961	0.948			
	1.060	1.052	1.044	1.035	1.026	1.015	1.004	0.992	0.980	0.967	0.953	0.939		
	1.064	1.056	1.048	1.040	1.030	1.020	1.009	0.997	0.985	0.972	0.958	0.944	0.930	
	1.068	1.060	1.052	1.044	1.034	1.024	1.013	1.002	0.989	0.977	0.963	0.949	0.935	0.920
1.072	1.064	1.056	1.047	1.038	1.028	1.017	1.006	0.994	0.981	0.968	0.954	0.940	0.925	0.911
	1.068	1.060	1.051	1.042	1.032	1.021	1.010	0.998	0.985	0.972	0.959	0.945	0.930	0.916
	1.063	1.054	1.045	1.035	1.025	1.014	1.002	0.990	0.977	0.963	0.949	0.935	0.920	
	1.057	1.048	1.038	1.028	1.017	1.005	0.993	0.981	0.967	0.954	0.939	0.925		
	1.050	1.041	1.031	1.020	1.009	0.997	0.984	0.971	0.958	0.944	0.929			
	1.043	1.033	1.022	1.011	1.000	0.987	0.975	0.961	0.948	0.933				
	1.035	1.025	1.014	1.002	0.990	0.978	0.965	0.951	0.937					
	1.027	1.016	1.005	0.993	0.980	0.968	0.954	0.941						

Table E11A-3.7. Fast Flux Distribution by Pin in MFA-1 at EOC 11A-3

CORE POSITION 1404

0.953	0.960	0.966	0.972	0.977	0.982	0.986	0.989								
0.957	0.964	0.970	0.976	0.981	0.986	0.990	0.994	0.997							
0.960	0.967	0.973	0.979	0.985	0.990	0.994	0.998	1.002	1.005						
0.962	0.969	0.976	0.982	0.988	0.993	0.998	1.002	1.006	1.009	1.012					
0.963	0.970	0.977	0.984	0.990	0.995	1.000	1.005	1.009	1.012	1.015	1.018				
0.964	0.971	0.978	0.985	0.991	0.997	1.002	1.007	1.011	1.015	1.018	1.021	1.024			
0.964	0.971	0.978	0.985	0.991	0.997	1.002	1.008	1.012	1.016	1.020	1.023	1.026	1.029		
0.963	0.970	0.977	0.984	0.991	0.997	1.002	1.008	1.013	1.017	1.021	1.025	1.028	1.031	1.033	
0.969	0.976	0.983	0.989	0.996	1.001	1.007	1.012	1.017	1.021	1.025	1.029	1.032	1.035		
0.974	0.981	0.987	0.994	1.000	1.005	1.011	1.016	1.020	1.025	1.029	1.033	1.036			
0.978	0.985	0.991	0.997	1.003	1.008	1.014	1.019	1.024	1.028	1.032	1.036				
0.982	0.988	0.994	1.000	1.005	1.011	1.016	1.021	1.026	1.031	1.035					
0.984	0.990	0.996	1.001	1.007	1.012	1.018	1.023	1.028	1.033						
0.986	0.992	0.997	1.003	1.008	1.014	1.019	1.025	1.030							
0.987	0.992	0.998	1.003	1.009	1.015	1.020	1.026								

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Table E11A-3.8. Fast Flux Distribution by Pin in MFA-2 at EOC 11A-3

CORE POSITION 2506

[illegible]

Table E11A-3.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 11A-3

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.0341E+15	2.2026E+15
SE	1.9788E+15	2.2969E+15
SW	2.0075E+15	2.1089E+15
W	2.1108E+15	1.8927E+15
NW	2.1746E+15	1.8453E+15
NE	2.0938E+15	2.0195E+15

Table E11A-3.10. Assembly Outlet Temperatures and
Flow Rates at EOC 11A-3

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE
	(DEG F)	(LB/H)
1404	1059	113570
1303	999	68360
1304	910	205640
1403	862	205660
1405	881	205660
1505	899	195550
1506	884	205640
2506	1043	113570
2404	1037	202240
2405	874	205660
2505	897	205640
2507	889	205640
2606	931	168640
2607	908	161730

Assembly flows are based on a calculated core pressure drop of 113.3 psi at a total reactor flow rate of 16.67E+06 lb/hr.

Table E11A-3.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 11A-3

1 temperature map for bundle 23		ASSEMBLY NO. 1404										MFA-1		
axial height 44.080 in		888	890	894	896	897	898	898	897	876				
		913	922	926	927	928	928	927	925	915				
		945	952	957	958	958	957	955	953	953				
		900	923	945	1005	1020	1024	1025	1026	1024	1012			
			1003	1030	1047	1050	1051	1051	1045	1015	962	926 880		
			1037	1070	1079	1081	1083	1083	1070	1049				
		902	925	949	1017	1069	1066	1090	1093	1094	1093	1080 1032 967 * 930 893		
			1045	1085	1090	1102	1104	1106	1105	1096	1060			
		903	928	952	1022	1078	1090	1104	1107	1109	1110	1107 1091 1037 969 * 933 895		
			1048	1090	1104	1109	1111	1113	1114	1113	1103 1064			
		904	930	955	1024	1081	1102	1109	1112	1114	1115	1116 1113 1095 1040 970 * 934 897		
			1050	1092	1107	1111	1114	1116	1118	1119	1118 1086 1066			
		904	931	957	1026	1083	1104	1111	1114	1116	1118 1120 1120 1117 1090 1041 969 * 934 898			
			1051	1093	1100	1113	1116	1118	1120	1122	1123	1121 1109 1067		
		903	931	950	1025	1083	1105	1112	1116	1118	1120 1122 1123 1124 1120 1100 1040 967 * 933 898			
			1045	1092	1109	1115	1118	1120	1122	1123	1125	1126 1123 1109 1062		
		899	920	955	1011	1077	1104	1113	1117	1120	1122	1123 1125 1126 1126 1120 1095 1027 965 * 932 897		
		074	911	947	965 * 925 884									
		880	915	949	1009	1078	1106	1115	1118	1121	1123	1125 1126 1128 1128 1122 1097 1030 974 * 939 903		
			1045	1094	1112	1118	1120	1123	1125	1126	1128	1129 1126 1112 1066		
		883	918	953	1025	1080	1111	1118	1122	1124	1126 1128 1129 1129 1125 1106 1047 978 * 943 907			
			1055	1100	1115	1121	1123	1125	1127	1129	1130 1120 1117 1074			
		885	921	957	1031	1092	1114	1121	1124	1126 1128 1130 1130 1127 1100 1050 979 * 944 900				
			1059	1103	1110	1123	1125	1127	1129	1130 1129 1118 1076				
		887	924	960	1034	1094	1116	1123	1126	1128 1129 1130 1127 1100 1051 978 * 944 909				
			1061	1105	1119	1124	1126 1128 1130 1129 1116 1076							
		888	926	963	1036	1095	1116	1122	1124	1126 1128 1125 1107 1050 976 * 943 909				
			1062	1104	1117	1121	1123 1125 1124 1115 1075							
		889	927	964	1035	1089	1106	1111	1113	1115 1114 1100 1046 974 * 942 909				
			1057	1090	1099	1103	1105 1106 1100 1060							
		886	926	963	1022	1050	1067	1071	1073	1074 1068 1033 972 * 940 908				
			1022	1030	1044	1047	1049 1046 1035							
			957	961	960	973	977	980	981	979 972 *				
		934	950	964	960	970	972	972	970	940				
		911	956	959	962	964	964	963	960	924				

Table E11A-3.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 11A-3

1 axial height	44.088 in	ASSEMBLY NO. 2506		MFA-2	
		900	908	988	988
925		925	929	929	929
939		939	943	943	943
		952	956	956	956
		965	969	969	969
		975	979	979	979
		985	989	989	989
		995	999	999	999
		1005	1009	1009	1009
		1015	1019	1019	1019
		1025	1029	1029	1029
		1035	1039	1039	1039
		1045	1049	1049	1049
		1055	1059	1059	1059
		1065	1069	1069	1069
		1075	1079	1079	1079
		1085	1089	1089	1089
		1095	1099	1099	1099
		1105	1109	1109	1109
		1115	1119	1119	1119
		1125	1129	1129	1129
		1135	1139	1139	1139
		1145	1149	1149	1149
		1155	1159	1159	1159
		1165	1169	1169	1169
		1175	1179	1179	1179
		1185	1189	1189	1189
		1195	1199	1199	1199
		1205	1209	1209	1209
		1215	1219	1219	1219
		1225	1229	1229	1229
		1235	1239	1239	1239
		1245	1249	1249	1249
		1255	1259	1259	1259
		1265	1269	1269	1269
		1275	1279	1279	1279
		1285	1289	1289	1289
		1295	1299	1299	1299
		1305	1309	1309	1309
		1315	1319	1319	1319
		1325	1329	1329	1329
		1335	1339	1339	1339
		1345	1349	1349	1349
		1355	1359	1359	1359
		1365	1369	1369	1369
		1375	1379	1379	1379
		1385	1389	1389	1389
		1395	1399	1399	1399
		1405	1409	1409	1409
		1415	1419	1419	1419
		1425	1429	1429	1429
		1435	1439	1439	1439
		1445	1449	1449	1449
		1455	1459	1459	1459
		1465	1469	1469	1469
		1475	1479	1479	1479
		1485	1489	1489	1489
		1495	1499	1499	1499
		1505	1509	1509	1509
		1515	1519	1519	1519
		1525	1529	1529	1529
		1535	1539	1539	1539
		1545	1549	1549	1549
		1555	1559	1559	1559
		1565	1569	1569	1569
		1575	1579	1579	1579
		1585	1589	1589	1589
		1595	1599	1599	1599
		1605	1609	1609	1609
		1615	1619	1619	1619
		1625	1629	1629	1629
		1635	1639	1639	1639
		1645	1649	1649	1649
		1655	1659	1659	1659
		1665	1669	1669	1669
		1675	1679	1679	1679
		1685	1689	1689	1689
		1695	1699	1699	1699
		1705	1709	1709	1709
		1715	1719	1719	1719
		1725	1729	1729	1729
		1735	1739	1739	1739
		1745	1749	1749	1749
		1755	1759	1759	1759
		1765	1769	1769	1769
		1775	1779	1779	1779
		1785	1789	1789	1789
		1795	1799	1799	1799
		1805	1809	1809	1809
		1815	1819	1819	1819
		1825	1829	1829	1829
		1835	1839	1839	1839
		1845	1849	1849	1849
		1855	1859	1859	1859
		1865	1869	1869	1869
		1875	1879	1879	1879
		1885	1889	1889	1889
		1895	1899	1899	1899
		1905	1909	1909	1909
		1915	1919	1919	1919
		1925	1929	1929	1929
		1935	1939	1939	1939
		1945	1949	1949	1949
		1955	1959	1959	1959
		1965	1969	1969	1969
		1975	1979	1979	1979
		1985	1989	1989	1989
		1995	1999	1999	1999
		2005	2009	2009	2009
		2015	2019	2019	2019
		2025	2029	2029	2029
		2035	2039	2039	2039
		2045	2049	2049	2049
		2055	2059	2059	2059
		2065	2069	2069	2069
		2075	2079	2079	2079
		2085	2089	2089	2089
		2095	2099	2099	2099
		2105	2109	2109	2109
		2115	2119	2119	2119
		2125	2129	2129	2129
		2135	2139	2139	2139
		2145	2149	2149	2149
		2155	2159	2159	2159
		2165	2169	2169	2169
		2175	2179	2179	2179
		2185	2189	2189	2189
		2195	2199	2199	2199
		2205	2209	2209	2209
		2215	2219	2219	2219
		2225	2229	2229	2229
		2235	2239	2239	2239
		2245	2249	2249	2249
		2255	2259	2259	2259
		2265	2269	2269	2269
		2275	2279	2279	2279
		2285	2289	2289	2289
		2295	2299	2299	2299
		2305	2309	2309	2309
		2315	2319	2319	2319
		2325	2329	2329	2329
		2335	2339	2339	2339
		2345	2349	2349	2349
		2355	2359	2359	2359
		2365	2369	2369	2369
		2375	2379	2379	2379
		2385	2389	2389	2389
		2395	2399	2399	2399
		2405	2409	2409	2409
		2415	2419	2419	2419
		2425	2429	2429	2429
		2435	2439	2439	2439
		2445	2449	2449	2449
		2455	2459	2459	2459
		2465	2469	2469	2469
		2475	2479	2479	2479
		2485	2489	2489	2489
		2495	2499	2499	2499
		2505	2509	2509	2509
		2515	2519	2519	2519
		2525	2529	2529	2529
		2535	2539	2539	2539
		2545	2549	2549	2549
		2555	2559	2559	2559
		2565	2569	2569	2569
		2575	2579	2579	2579
		2585	2589	2589	2589
		2595	2599	2599	2599
		2605	2609	2609	2609
		2615	2619	2619	2619
		2625	2629	2629	2629
		2635	2639	2639	2639
		2645	2649	2649	2649
		2655	2659	2659	2659
		2665	2669	2669	2669
		2675	2679	2679	2679
		2685	2689	2689	2689
		2695	2699	2699	2699
		2705	2709	2709	2709
		2715	2719	2719	2719
		2725	2729	2729	2729
		2735	2739	2739	2739
		2745	2749	2749	2749
		2755	2759	2759	2759
		2765	2769	2769	2769
		2775	2779	2779	2779
		2785	2789	2789	2789
		2795	2799	2799	2799
		2805	2809	2809	2809
		2815	2819	2819	2819
		2825	2829	2829	2829
		2835	2839	2839	2839
		2845	2849	2849	2849
		2855	2859	2859	2859
		2865	2869	2869	2869
		2875	2879	2879	2879
		2885	2889	2889	2889
		2895	2899	2899	2899
		2905	2909	2909	2909
		2915	2919	2919	2919
		2925	2929	2929	2929
		2935	2939	2939	2939
		2945	2949	2949	2949
		2955	2959	2959	2959
		2965	2969	2969	2969
		2975	2979	2979	2979
		2985	2989	2989	2989
		2995	2999	2999	2999
		3005	3009	3009	3009
		3015	3019	3019	3019
		3025	3029	3029	3029
		3035	3039	3039	3039
		3045	3049	3049	3049
		3055	3059	3059	3059
		3065	3069	3069	3069
		3075	3079	3079	3079
		3085	3089	3089	3089
		3095	3099	3099	3099
		3105	3109	3109	3109
		3115	3119	3119	3119
		3125	3129	3129	3129
		3135	3139	3139	3139
		3145	3149	3149	3149
		3155	3159	3159	3159
		3165	3169	3169	3169
		3175	3179	3179	3179
		3185	3189	3189	3189
		3195	3199	3199	3199
		3205	3209	3209	3209
		3215	3219	3219	3219
		3225	3229	3229	3229
		3235	3239	3239	3239
		3245	3249	3249	3249
		3255	3259	3259	3259
		3265	3269	3269	3269
		3275	3279	3279	3279
		3285	3289	3289	3289
		3295	3299	3299	3299
		3305	3309	3309	3309
		3315	3319	3319	3319
		3325	3329	3329	3329
		3335	3339	3339	3339
		3345	3349	3349	3349

Table E11A-3.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 11A-3

temperature map for bundle 23 axial height 50.500 in	ASSEMBLY NO. 1404	MFA-1
693	981 985 988 989 918 918 989	888
927	935 939 941 941 941 940 939	938
	961 966 972 973 973 972 978 983 978	
912 937	951 959 1832 1842 1845 1846 1845 1838 1811 978	939 988
	1838 1864 1875 1879 1888 1888 1872 1842	
914 939	953 1813 1854 1883 1889 1891 1892 1898 1874 1829 983	944 984
	1839 1882 1886 1183 1186 1187 1185 1853 1854	
915 941	966 1819 1874 1888 1186 1189 1111 1112 1187 1887 1835 985	946 987
	1843 1888 1186 1112 1115 1117 1118 1115 1181 1858	
916 943	959 1821 1878 1183 1112 1116 1118 1128 1128 1114 1892 1837 985	947 989
	1845 1891 1189 1115 1119 1121 1123 1123 1128 1185 1868	
915 944	972 1823 1888 1185 1115 1119 1121 1123 1124 1118 1895 1838 984	947 988
	1845 1892 1111 1118 1121 1123 1125 1127 1127 1124 1187 1861	
914 944	973 1821 1879 1187 1116 1121 1123 1125 1127 1128 1128 1121 1886 1835 982	947 918
	1837 1889 1111 1119 1122 1125 1127 1129 1138 1138 1125 1186 1854	
911 941	978 1886 1871 1185 1117 1122 1124 1127 1128 1136 1131 1138 1121 1888 1823 981	945 989
915 945	978 1886 1871 1185 1117 1122 1124 1127 1128 1136 1131 1138 1121 1888 1823 981	945 989
932 928	963 1885 1872 1186 1116 1123 1125 1128 1138 1132 1133 1131 1122 1891 1826 983	953 916
	1837 1893 1114 1122 1125 1128 1138 1131 1133 1133 1129 1188 1858	
895 931	966 1828 1883 1112 1122 1126 1129 1131 1133 1134 1133 1127 1182 1843 994	957 919
	1848 1888 1118 1125 1128 1138 1132 1134 1134 1131 1115 1868	
897 934	978 1825 1888 1115 1125 1129 1131 1133 1134 1134 1128 1184 1847 994	958 921
	1852 1182 1121 1127 1138 1132 1134 1135 1132 1116 1878	
899 937	974 1838 1891 1117 1126 1138 1132 1134 1134 1128 1185 1847 993	958 922
	1855 1183 1122 1128 1138 1132 1133 1131 1116 1878	
988-939	977 1832 1891 1115 1124 1127 1129 1138 1125 1183 1846 992	957 922
	1856 1181 1117 1122 1125 1126 1125 1112 1868	
988 940	978 1831 1883 1183 1189 1112 1113 1111 1854 1842 998	956 922
	1849 1884 1895 1889 1182 1182 1894 1868	
988 939	977 1817 1858 1851 1855 1858 1858 1851 1828 988	955 921
	1817 1834 1841 1844 1846 1845 1831	
950	972 976 982 988 993 996 998 996 998	
	976 981 985 988 998 998 988	966
927	975 979 981 983 983 982 988	941

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Table E11A-3.17. Composition of MFA-1 at EOC 11A-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.0710E-05
			U-238	7.0573E-03	6.8653E-03
			Pu-239	0.0000E+00	1.6061E-04
			Pu-240	0.0000E+00	6.2766E-06
			FP	0.0000E+00	2.7480E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	8.4339E-06
			U-238	4.4499E-03	4.3042E-03
			Pu-239	1.7520E-03	1.4795E-03
			Pu-240	2.2340E-04	2.7570E-04
			Pu-241	1.9280E-05	2.3416E-05
			Pu-242	4.7430E-06	5.1055E-06
			Am-241	7.6680E-07	2.2380E-06
			FP	0.0000E+00	3.6121E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	7.9343E-06
			U-238	4.4499E-03	4.2665E-03
			Pu-239	1.7520E-03	1.4134E-03
			Pu-240	2.2340E-04	2.7843E-04
			Pu-241	1.9280E-05	2.3724E-05
			Pu-242	4.7430E-06	5.1174E-06
			Am-241	7.6680E-07	2.1879E-06
			FP	0.0000E+00	4.6239E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	7.6655E-06
			U-238	4.4499E-03	4.2467E-03
			Pu-239	1.7520E-03	1.3809E-03
			Pu-240	2.2340E-04	2.8255E-04
			Pu-241	1.9280E-05	2.4346E-05
			Pu-242	4.7430E-06	5.1668E-06
			Am-241	7.6680E-07	2.1760E-06
			FP	0.0000E+00	5.0990E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	7.7547E-06
			U-238	4.4499E-03	4.2532E-03
			Pu-239	1.7520E-03	1.3914E-03
			Pu-240	2.2340E-04	2.8089E-04
			Pu-241	1.9280E-05	2.4097E-05
			Pu-242	4.7430E-06	5.1465E-06
			Am-241	7.6680E-07	2.1798E-06
			FP	0.0000E+00	4.9469E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	8.1903E-06
			U-238	4.4499E-03	4.2847E-03
			Pu-239	1.7520E-03	1.4430E-03
			Pu-240	2.2340E-04	2.7349E-04
			Pu-241	1.9280E-05	2.3030E-05
			Pu-242	4.7430E-06	5.0641E-06
			Am-241	7.6680E-07	2.1987E-06
			FP	0.0000E+00	4.2023E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	8.8321E-06
			U-238	4.4499E-03	4.3302E-03
			Pu-239	1.7520E-03	1.5237E-03
			Pu-240	2.2340E-04	2.6611E-04
			Pu-241	1.9280E-05	2.2112E-05
			Pu-242	4.7430E-06	5.0090E-06
			Am-241	7.6680E-07	2.2463E-06
			FP	0.0000E+00	3.0174E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.1796E-05
			U-238	7.0573E-03	6.9257E-03
			Pu-239	0.0000E+00	1.1354E-04
			Pu-240	0.0000E+00	2.7526E-06
			FP	0.0000E+00	1.6943E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11A-3.18. Composition of MFA-2 at EOC 11A-3

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.0640E-05
			U-238	7.0573E-03	6.8638E-03
			Pu-239	0.0000E+00	1.6120E-04
			Pu-240	0.0000E+00	6.5696E-06
			FP	0.0000E+00	2.8194E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	7.8673E-06
			U-238	4.4270E-03	4.2792E-03
			Pu-239	1.7483E-03	1.4699E-03
			Pu-240	2.2290E-04	2.7542E-04
			Pu-241	1.9040E-05	2.3313E-05
			Pu-242	4.7330E-06	5.0929E-06
			Am-241	7.5700E-07	2.2254E-06
			FP	0.0000E+00	3.6880E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	7.3712E-06
			U-238	4.4270E-03	4.2389E-03
			Pu-239	1.7483E-03	1.3997E-03
			Pu-240	2.2290E-04	2.7822E-04
			Pu-241	1.9040E-05	2.3631E-05
			Pu-242	4.7330E-06	5.1041E-06
			Am-241	7.5700E-07	2.1757E-06
			FP	0.0000E+00	4.7650E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	7.0980E-06
			U-238	4.4270E-03	4.2173E-03
			Pu-239	1.7483E-03	1.3645E-03
			Pu-240	2.2290E-04	2.8262E-04
			Pu-241	1.9040E-05	2.4318E-05
			Pu-242	4.7330E-06	5.1586E-06
			Am-241	7.5700E-07	2.1652E-06
			FP	0.0000E+00	5.2827E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	7.1728E-06
			U-238	4.4270E-03	4.2233E-03
			Pu-239	1.7483E-03	1.3737E-03
			Pu-240	2.2290E-04	2.8118E-04
			Pu-241	1.9040E-05	2.4093E-05
			Pu-242	4.7330E-06	5.1401E-06
			Am-241	7.5700E-07	2.1680E-06
			FP	0.0000E+00	5.1464E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	7.5786E-06
			U-238	4.4270E-03	4.2547E-03
			Pu-239	1.7483E-03	1.4255E-03
			Pu-240	2.2290E-04	2.7408E-04
			Pu-241	1.9040E-05	2.3040E-05
			Pu-242	4.7330E-06	5.0588E-06
			Am-241	7.5700E-07	2.1837E-06
			FP	0.0000E+00	4.3971E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	8.1868E-06
			U-238	4.4270E-03	4.3013E-03
			Pu-239	1.7483E-03	1.5078E-03
			Pu-240	2.2290E-04	2.6740E-04
			Pu-241	1.9040E-05	2.2193E-05
			Pu-242	4.7330E-06	5.0102E-06
			Am-241	7.5700E-07	2.2295E-06
			FP	0.0000E+00	3.1779E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.1576E-05
			U-238	7.0573E-03	6.9156E-03
			Pu-239	0.0000E+00	1.2129E-04
			Pu-240	0.0000E+00	3.3420E-06
			FP	0.0000E+00	1.8917E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.11 Cycle 11B-1

Table B11B-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11B-1

CORE POS.	***** BELOW CORE	POWER IN IN CORE	MEGAWATTS ABOVE CORE	***** TOTAL PWR
1404	7.484E-02	4.002E+00	4.082E-02	4.117E+00
1303	1.569E-01	1.912E+00	7.264E-02	2.142E+00
1304	0.000E+00	7.464E+00	0.000E+00	7.464E+00
1403	1.099E-02	3.844E+00	6.432E-03	3.861E+00
1405	9.165E-03	3.758E+00	6.694E-03	3.774E+00
1505	7.910E-03	3.856E+00	5.002E-03	3.869E+00
1506	1.018E-02	3.856E+00	7.066E-03	3.873E+00
2506	7.139E-02	3.795E+00	4.377E-02	3.911E+00
2404	0.000E+00	6.924E+00	0.000E+00	6.924E+00
2505	1.427E-02	3.972E+00	7.562E-03	3.993E+00
2405	8.214E-03	5.360E+00	6.535E-03	5.374E+00
2606	7.378E-03	3.841E+00	5.421E-03	3.854E+00
2607	1.193E-02	3.318E+00	7.725E-03	3.338E+00
2507	1.081E-02	3.972E+00	8.099E-03	3.991E+00

Table B11B-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11B-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1404	3.421E+15	2.167E+15
MFA-2	2506	3.258E+15	2.134E+15

Table B11B-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.9486E-02	1.5457E-02	0.0000E+00
-92.78	6.3230E-02	2.9794E-02	0.0000E+00
-87.78	1.0120E-01	4.7582E-02	0.0000E+00
-82.78	1.4619E-01	7.0801E-02	0.0000E+00
-77.78	2.0093E-01	1.0188E-01	0.0000E+00
-72.15	2.6248E-01	1.4189E-01	0.0000E+00
-65.90	3.2386E-01	1.9186E-01	0.0000E+00
-60.35	3.8774E-01	2.5871E-01	8.4319E-02
-55.49	4.7086E-01	3.4517E-01	9.7617E-02
-50.62	5.6590E-01	4.5532E-01	1.1600E-01
-47.17	6.4070E-01	5.5746E-01	1.3503E-01
-43.58	7.1891E-01	6.7296E-01	7.7788E-01
-38.45	8.3203E-01	8.1321E-01	8.6861E-01
-33.32	9.3709E-01	9.3277E-01	9.6772E-01
-28.20	1.0289E+00	1.0320E+00	1.0172E+00
-23.07	1.1056E+00	1.1130E+00	1.0910E+00
-17.94	1.1654E+00	1.1752E+00	1.1489E+00
-12.82	1.2072E+00	1.2177E+00	1.1670E+00
-7.69	1.2308E+00	1.2418E+00	1.1894E+00
-2.56	1.2358E+00	1.2470E+00	1.1940E+00
2.56	1.2221E+00	1.2334E+00	1.1880E+00
7.69	1.1896E+00	1.2007E+00	1.1564E+00
12.82	1.1391E+00	1.1499E+00	1.1073E+00
17.94	1.0723E+00	1.0827E+00	1.0743E+00
23.07	9.9044E-01	9.9900E-01	9.9268E-01
28.20	8.9577E-01	9.0100E-01	8.9871E-01
33.32	7.9076E-01	7.9047E-01	8.3305E-01
38.45	6.7741E-01	6.6640E-01	7.1852E-01
43.58	5.6096E-01	5.3075E-01	6.0927E-01
47.17	4.8391E-01	4.2883E-01	8.5129E-02
50.62	4.1269E-01	3.4096E-01	6.7771E-02
55.49	3.2519E-01	2.4828E-01	5.1119E-02
60.35	2.4858E-01	1.7596E-01	3.8789E-02
64.98	1.9896E-01	1.3231E-01	0.0000E+00
69.39	1.6942E-01	1.0859E-01	0.0000E+00
76.46	1.2764E-01	7.6709E-02	0.0000E+00
86.80	8.2660E-02	4.6073E-02	0.0000E+00
98.14	4.7519E-02	2.5108E-02	0.0000E+00
110.00	2.0377E-02	1.1214E-02	0.0000E+00

Table B11B-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6753E-02	1.3607E-02	0.0000E+00
-92.78	5.7376E-02	2.6261E-02	0.0000E+00
-87.78	9.1949E-02	4.2025E-02	0.0000E+00
-82.78	1.3318E-01	6.2728E-02	0.0000E+00
-77.78	1.8401E-01	9.0670E-02	0.0000E+00
-72.15	2.4255E-01	1.2715E-01	0.0000E+00
-65.90	3.0288E-01	1.7430E-01	0.0000E+00
-60.35	3.6699E-01	2.3920E-01	8.4172E-02
-55.49	4.5022E-01	3.2454E-01	9.8142E-02
-50.62	5.4601E-01	4.3572E-01	1.1698E-01
-47.17	6.2250E-01	5.4041E-01	1.3671E-01
-43.58	7.0300E-01	6.5868E-01	7.6570E-01
-38.45	8.2011E-01	8.0282E-01	8.5735E-01
-33.32	9.2846E-01	9.2501E-01	9.5995E-01
-28.20	1.0225E+00	1.0255E+00	1.0106E+00
-23.07	1.1008E+00	1.1072E+00	1.0862E+00
-17.94	1.1616E+00	1.1697E+00	1.1453E+00
-12.82	1.2040E+00	1.2125E+00	1.1624E+00
-7.69	1.2284E+00	1.2370E+00	1.1855E+00
-2.56	1.2343E+00	1.2433E+00	1.1911E+00
2.56	1.2218E+00	1.2314E+00	1.1856E+00
7.69	1.1910E+00	1.2010E+00	1.1558E+00
12.82	1.1427E+00	1.1531E+00	1.1091E+00
17.94	1.0784E+00	1.0893E+00	1.0788E+00
23.07	9.9855E-01	1.0084E+00	9.9954E-01
28.20	9.0533E-01	9.1256E-01	9.0729E-01
33.32	8.0112E-01	8.0333E-01	8.4390E-01
38.45	6.8766E-01	6.7878E-01	7.3050E-01
43.58	5.7031E-01	5.4059E-01	6.2534E-01
47.17	4.9283E-01	4.3571E-01	9.4294E-02
50.62	4.2132E-01	3.4515E-01	7.5864E-02
55.49	3.3350E-01	2.5021E-01	5.8233E-02
60.35	2.5594E-01	1.7643E-01	4.5000E-02
64.98	2.0559E-01	1.3164E-01	0.0000E+00
69.39	1.7496E-01	1.0729E-01	0.0000E+00
76.46	1.3138E-01	7.4836E-02	0.0000E+00
86.80	8.4382E-02	4.4182E-02	0.0000E+00
98.14	4.7975E-02	2.3688E-02	0.0000E+00
110.00	2.0389E-02	1.0458E-02	0.0000E+00

Table B11B-1.5. Fission Power Distribution by Pin in MFA-1 at BOC 11B-1

CORE POSITION 1404

	0.941	0.947	0.953	0.958	0.963	0.967	0.971	0.974	
	0.945	0.951	0.957	0.963	0.968	0.973	0.977	0.980	0.984
	0.948	0.955	0.962	0.967	0.973	0.978	0.982	0.986	0.989
	0.952	0.959	0.965	0.971	0.977	0.982	0.987	0.991	0.994
	0.954	0.962	0.969	0.975	0.981	0.986	0.991	0.995	0.999
	0.957	0.964	0.971	0.978	0.984	0.990	0.995	0.999	1.003
	0.959	0.967	0.974	0.981	0.987	0.993	0.998	1.003	1.007
0.961	0.969	0.976	0.983	0.990	0.996	1.001	1.006	1.010	1.014
	0.971	0.978	0.986	0.992	0.998	1.004	1.009	1.013	1.017
	0.980	0.988	0.995	1.001	1.006	1.011	1.016	1.020	1.023
	0.990	0.997	1.003	1.009	1.014	1.018	1.022	1.025	1.028
	0.999	1.005	1.011	1.016	1.020	1.024	1.028	1.030	1.032
	1.007	1.013	1.018	1.023	1.026	1.030	1.032	1.034	1.036
	1.015	1.020	1.024	1.028	1.032	1.035	1.037	1.038	1.039
	1.022	1.026	1.030	1.034	1.037	1.039	1.040	1.041	

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Table B11B-1.6. Fission Power Distribution by Pin in MFA-2 at BOC 11B-1

CORE POSITION 2506

	1.036	1.027	1.017	1.007	0.995	0.983	0.971	0.957	
	1.042	1.033	1.024	1.014	1.003	0.991	0.978	0.965	0.951
	1.049	1.040	1.031	1.021	1.010	0.998	0.986	0.973	0.959
	1.055	1.047	1.037	1.027	1.017	1.005	0.993	0.980	0.967
	1.062	1.053	1.044	1.034	1.023	1.012	1.000	0.987	0.974
	1.068	1.059	1.050	1.040	1.030	1.018	1.006	0.994	0.980
	1.074	1.066	1.056	1.046	1.036	1.024	1.013	1.000	0.987
1.080	1.072	1.062	1.052	1.042	1.030	1.019	1.006	0.993	0.979
	1.077	1.068	1.058	1.047	1.036	1.024	1.012	0.999	0.985
	1.073	1.063	1.053	1.041	1.030	1.017	1.004	0.991	0.977
	1.068	1.058	1.047	1.035	1.022	1.010	0.996	0.982	0.968
	1.062	1.051	1.040	1.027	1.015	1.001	0.988	0.973	0.959
	1.056	1.044	1.032	1.019	1.006	0.992	0.978	0.964	0.949
	1.048	1.036	1.023	1.010	0.997	0.983	0.968	0.954	0.939
	1.039	1.027	1.014	1.001	0.987	0.973	0.958	0.943	

Table B11B-1.7. Fast Flux Distribution by Pin in MFA-1 at BOC 11B-1

CORE POSITION 1404

[illegible]

Table B11B-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 11B-1

CORE POSITION 2506

	1.062	1.046	1.029	1.012	0.995	0.978	0.960	0.943						
	1.071	1.055	1.039	1.022	1.005	0.988	0.971	0.953	0.936					
	1.080	1.064	1.048	1.031	1.015	0.998	0.981	0.964	0.946	0.929				
	1.087	1.072	1.056	1.040	1.024	1.007	0.990	0.973	0.956	0.939	0.921			
	1.093	1.079	1.063	1.048	1.032	1.015	0.999	0.982	0.965	0.948	0.930	0.912		
	1.099	1.085	1.070	1.055	1.039	1.023	1.007	0.991	0.974	0.957	0.939	0.922	0.903	
	1.104	1.090	1.076	1.061	1.046	1.030	1.014	0.998	0.982	0.965	0.948	0.930	0.912	0.894
1.108	1.095	1.081	1.067	1.052	1.037	1.021	1.005	0.989	0.972	0.955	0.938	0.920	0.902	0.883
	1.099	1.086	1.072	1.058	1.043	1.028	1.012	0.996	0.979	0.962	0.945	0.928	0.909	0.891
	1.090	1.077	1.063	1.048	1.033	1.018	1.002	0.986	0.969	0.952	0.935	0.917	0.898	
	1.081	1.067	1.053	1.038	1.023	1.008	0.992	0.975	0.958	0.941	0.923	0.905		
	1.071	1.057	1.043	1.028	1.013	0.997	0.981	0.964	0.947	0.929	0.911			
	1.061	1.047	1.033	1.018	1.002	0.986	0.970	0.952	0.935	0.917				
	1.051	1.037	1.022	1.007	0.991	0.975	0.958	0.940	0.922					
	1.041	1.026	1.011	0.995	0.979	0.962	0.945	0.927						

Table B11B-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11B-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.0774E+15	2.3135E+15
SE	1.9983E+15	2.3555E+15
SW	2.0500E+15	2.1278E+15
W	2.1977E+15	1.9105E+15
NW	2.3235E+15	1.8854E+15
NE	2.1810E+15	2.0916E+15

Table B11B-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 11B-1

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE
	(DEG F)	(LB/H)
1404	1048	114690
1303	1002	69040
1304	1059	200400
1403	879	207670
1405	880	207700
1505	890	197480
1506	880	207670
2506	1046	114690
2404	1037	204240
2405	1016	171220
2505	890	207670
2507	893	207670
2606	926	170310
2607	899	170310

Assembly flows are based on a calculated core pressure drop of 110.1 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B1B-1.12. MFA-2 Sodium Subchannel Temperatures at Top of Core Elevation for BOC 11B-1

Temperature map for bundle axial height	44.00 in	ASSEMBLY	NO. 2596	MFA-2															
24	898	898	898	896	894	892	889	887											
937	927	928	926	924	921	918	915	913											
950	955	956	954	951	948	944	939	938											
1012	1024	1023	1021	1017	1012	997													
964	968	955	1013	1045	1049	1047	1044	1039	1030	997	944	927	909						
1048	1077	1080	1078	1074	1070	1060	1029												
969	965	962	1030	1079	1090	1089	1085	1081	1075	1059	1009	945	929	912					
1059	1094	1101	1098	1094	1090	1085	1071	1032											
972	970	968	1037	1089	1103	1103	1099	1095	1090	1082	1062	1000	943	928	913				
1065	1101	1108	1105	1101	1096	1092	1085	1071	1030										
974	973	973	1042	1095	1109	1108	1104	1099	1094	1089	1081	1060	1005	940	926	911			
1069	1105	1112	1109	1105	1099	1094	1089	1083	1067	1026									
976	976	977	1046	1099	1113	1112	1107	1097	1092	1086	1078	1056	1001	937	923	909			
1072	1109	1116	1113	1100	1102	1097	1091	1086	1079	1064	1022								
977	978	980	1047	1102	1116	1116	1111	1105	1099	1094	1089	1083	1074	1052	996	933	920	907	
1068	1110	1119	1116	1111	1105	1099	1094	1088	1083	1075	1050	1014							
976	978	979	1035	1098	1118	1119	1114	1108	1102	1096	1091	1085	1080	1069	1043	982	930	917	904
957	966	974															930	900	895
947	961	975	1034	1098	1118	1119	1114	1108	1102	1096	1091	1085	1079	1069	1043	984	937	913	899
1067	1110	1119	1116	1111	1105	1099	1093	1088	1082	1075	1050	1015							
948	963	977	1047	1102	1117	1116	1111	1105	1099	1093	1088	1082	1073	1052	999	941	917	892	
1072	1110	1117	1113	1108	1102	1096	1090	1085	1078	1063	1023								
948	964	979	1048	1100	1114	1112	1107	1101	1096	1090	1085	1076	1055	1003	943	919	895		
1071	1107	1113	1110	1104	1099	1093	1088	1081	1066	1026									
947	964	980	1046	1097	1110	1108	1104	1098	1093	1087	1079	1058	1005	944	921	897			
1068	1103	1109	1105	1100	1095	1090	1083	1068	1028										
945	962	979	1043	1092	1104	1103	1098	1093	1088	1080									

Table B11B-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 11B-1

1	temperature map for bundle 23	ASSEMBLY NO. 1484	MFA-1	
	axial height			
886		895 899 991 992 993 993 983		884
	919	927 931 933 933 933 932 931		923
		* 951 958 962 963 963 962 961 959 961 *		
		998 1085 1010 1011 1011 1088 997		
995 928 *	951 988 1019 1029 1032 1033 1026 1080 968 *			932 895
	1017 1059 1061 1064 1066 1066 1065 1059 1030			
996 930 *	953 1001 1049 1068 1074 1077 1078 1076 1061 1017 973 *			936 899
	1026 1067 1083 1088 1091 1092 1091 1079 1041			
997 932 *	956 1006 1059 1082 1091 1094 1096 1097 1092 1073 1023 975 *			939 901
	1029 1073 1090 1095 1099 1101 1102 1100 1096 1045			
998 933 *	958 1008 1062 1087 1096 1108 1102 1104 1104 1099 1078 1025 976 *			940 903
	1031 1075 1093 1099 1103 1105 1107 1108 1105 1090 1047			
997 934 *	960 1009 1064 1069 1098 1103 1105 1107 1109 1108 1103 1080 1026 977 *			941 905
	1039 1075 1094 1101 1105 1107 1109 1111 1111 1100 1092 1048			
996 934 *	961 1007 1063 1090 1100 1104 1107 1109 1111 1112 1111 1105 1001 1024 977 *			942 906
	1023 1072 1094 1102 1106 1108 1111 1112 1114 1114 1108 1090 1042			
993 931 *	958 993 1055 1088 1100 1105 1108 1110 1112 1114 1115 1113 1104 1074 1014			978 * 943 907
895 919 *	952			962 * 960 937
896 925 *	952			962 * 960 937
	1023 1075 1097 1105 1109 1111 1113 1115 1116 1116 1112 1083 1046			
898 928 *	956 1007 1068 1095 1105 1110 1112 1114 1116 1117 1116 1110 1006 1033 953 *			938 987
	1033 1082 1101 1100 1112 1114 1116 1117 1117 1114 1098 1056			
991 931 *	960 1013 1072 1099 1100 1112 1114 1116 1117 1117 1111 1089 1037 983 *			991 989
	1038 1086 1104 1111 1114 1116 1117 1117 1114 1099 1059			
993 934 *	964 1017 1075 1101 1110 1113 1115 1117 1117 1111 1080 1037 992 *			991 991
	1041 1088 1105 1111 1114 1115 1116 1113 1099 1057			
	994 * 936 *			
	1019 1076 1100 1108 1111 1112 1113 1100 1087 1036 998 *			981 992
	1042 1085 1101 1106 1108 1109 1107 1095 1055			
995 937 *	969 1018 1059 1089 1094 1096 1097 1094 1070 1032 997 *			989 992
	1036 1070 1081 1084 1086 1086 1070 1047			
	994 936 *			
	1005 1037 1048 1052 1054 1054 1047 1018 984 *			987 990
	1006 1022 1028 1032 1033 1032 1019			
	* 964 967 973 978 983 986 986 983 *			
	* 947 970 975 979 983 985 986 985 *			984
	930			985

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ASSEMBLY NO. 1484	WFA-1
911	918 921 923 925 926 928 929 969
946	951 955 957 958 959 959 959 951
	900 904 900 900 900 900 900 900 902 *
930 955 *	994 1003 1008* 1010 1018 1007 1002
	973 932 1007 1016 1020 1021 1019 1014 1005 997 *
930 955 *	1005 1024 1035 1041 1042 1039 1032 1010 *
930 956 *	989 923 1029 1040 1022 1051 1046 1034 1016 1002 *
	1012 1030 1055 1065 1069 1069 1063 1049 1028
930 956 *	982 1003 1033 1055 1063 1075 1077 1074 1065 1047 1022 1005 *
	1016 1046 1060 1080 1086 1080 1086 1077 1059 1034
929 956 *	963 1005 1030 1064 1080 1080 1082 1092 1080 1075 1053 1026 1000 *
	1017 1049 1073 1009 1095 1090 1093 1095 1085 1064 1096
927 956 *	994 1005 1035 1067 1065 1085 1100 1102 1101 1095 1090 1056 1027 1010 *
	1015 1040 1074 1001 1009 1104 1106 1105 1100 1087 1085 1036
925 955 *	984 1002 1036 1066 1006 1030 1103 1106 1107 1105 1090 1001 1055 1026 1012 *
	1007 1041 1071 1090 1101 1106 1109 1110 1100 1101 1086 1061 1031 1033
921 952 *	962 994 1025 1059 1083 1067 1100 1110 1110 1107 1096 1076 1049 1024 1015 *
924 951 *	970 1026 1069 1084 1099 1106 1110 1112 1112 1100 1090 1078 1051 1028 1024 *
	1006 1042 1073 1093 1093 1100 1111 1112 1111 1104 1069 1064 1030
925 953 *	979 1000 1038 1070 1091 1103 1109 1112 1112 1110 1103 1086 1061 1036 1026 *
	1015 1052 1000 1007 1106 1110 1112 1111 1106 1094 1072 1046
927 955 *	982 1006 1044 1075 1094 1104 1109 1111 1109 1103 1089 1065 1040 1026 *
	1020 1057 1003 1096 1106 1109 1109 1105 1094 1074 1048
928 956 *	904 1010 1047 1092 1102 1104 1104 1093 1087 1066 1048 1024 *
	1023 1057 1001 1094 1100 1102 1099 1090 1072 1040
923 958 *	987 1011 1045 1063 1083 1090 1092 1089 1080 1061 1030 1022 *
	1022 1052 1071 1001 1005 1085 1079 1005 1044 *
929 959 *	960 1009 1036 1065 1065 1065 1069 1064 1051 1033 1019 *
	1017 1030 1051 1050 1061 1059 1051 1037 *
928 958 *	908 1003 1020 1030 1037 1040 1040 1035 1025 1016 *
	1004 1015 1023 1020 1031 1030 1025
	996 990 996 1001 1007 1011 1014 1015 1015 *
972	995 989 1003 1007 1009 1011 1011 1014
956	999 1002 1005 1007 1000 1000 1000 1013

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Table E11B-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 11B-1

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE		TOTAL PWR
1404	7.893E-02	3.912E+00	4.998E-02		4.041E+00
1303	1.578E-01	1.991E+00	8.538E-02		2.234E+00
1304	0.000E+00	7.196E+00	0.000E+00		7.196E+00
1403	1.166E-02	3.846E+00	8.208E-03		3.866E+00
1405	9.841E-03	3.674E+00	8.068E-03		3.692E+00
1505	8.501E-03	3.885E+00	6.482E-03		3.900E+00
1506	1.046E-02	3.786E+00	8.409E-03		3.805E+00
2506	7.427E-02	3.673E+00	5.263E-02		3.800E+00
2404	0.000E+00	6.682E+00	0.000E+00		6.682E+00
2505	1.435E-02	3.950E+00	9.364E-03		3.974E+00
2405	9.120E-03	5.150E+00	7.990E-03		5.167E+00
2606	7.820E-03	3.782E+00	6.682E-03		3.797E+00
2607	1.182E-02	3.227E+00	8.870E-03		3.248E+00
2507	1.097E-02	3.831E+00	9.339E-03		3.852E+00

Table E11B-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 11B-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1404	3.446E+15	2.168E+15
MFA-2	2506	3.247E+15	2.109E+15

Table E11B-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 11B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7933E-02	1.4749E-02	0.0000E+00
-92.78	5.9903E-02	2.8429E-02	0.0000E+00
-87.78	9.5890E-02	4.5403E-02	0.0000E+00
-82.78	1.3853E-01	6.7568E-02	0.0000E+00
-77.78	1.9042E-01	9.7240E-02	0.0000E+00
-72.15	2.4878E-01	1.3544E-01	0.0000E+00
-65.90	3.0698E-01	1.8322E-01	0.0000E+00
-60.35	3.6747E-01	2.4731E-01	9.2332E-02
-55.49	4.4630E-01	3.2953E-01	1.0594E-01
-50.62	5.3640E-01	4.3381E-01	1.2435E-01
-47.17	6.0723E-01	5.3017E-01	1.4286E-01
-43.58	6.8136E-01	6.3900E-01	7.3944E-01
-38.45	7.8943E-01	7.7238E-01	8.2705E-01
-33.32	8.9094E-01	8.8732E-01	9.2338E-01
-28.20	9.8101E-01	9.8406E-01	9.6686E-01
-23.07	1.0583E+00	1.0652E+00	1.0411E+00
-17.94	1.1210E+00	1.1299E+00	1.1017E+00
-12.82	1.1682E+00	1.1777E+00	1.1222E+00
-7.69	1.1996E+00	1.2097E+00	1.1520E+00
-2.56	1.2150E+00	1.2254E+00	1.1666E+00
2.56	1.2139E+00	1.2247E+00	1.1742E+00
7.69	1.1960E+00	1.2070E+00	1.1570E+00
12.82	1.1613E+00	1.1723E+00	1.1237E+00
17.94	1.1099E+00	1.1209E+00	1.1131E+00
23.07	1.0411E+00	1.0504E+00	1.0449E+00
28.20	9.5569E-01	9.6164E-01	9.6037E-01
33.32	8.5539E-01	8.5551E-01	9.1045E-01
38.45	7.4162E-01	7.2987E-01	7.9488E-01
43.58	6.2027E-01	5.8705E-01	6.8100E-01
47.17	5.3777E-01	4.7686E-01	1.0388E-01
50.62	4.6083E-01	3.8128E-01	8.4183E-02
55.49	3.6477E-01	2.7914E-01	6.4669E-02
60.35	2.7987E-01	1.9864E-01	4.9800E-02
64.98	2.2476E-01	1.4972E-01	0.0000E+00
69.39	1.9171E-01	1.2304E-01	0.0000E+00
76.46	1.4474E-01	8.7086E-02	0.0000E+00
86.80	9.3858E-02	5.2375E-02	0.0000E+00
98.14	5.3952E-02	2.8555E-02	0.0000E+00
110.00	2.3069E-02	1.2731E-02	0.0000E+00

Table E11B-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 11B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5461E-02	1.3033E-02	0.0000E+00
-92.78	5.4615E-02	2.5150E-02	0.0000E+00
-87.78	8.7529E-02	4.0241E-02	0.0000E+00
-82.78	1.2679E-01	6.0050E-02	0.0000E+00
-77.78	1.7518E-01	8.6784E-02	0.0000E+00
-72.15	2.3090E-01	1.2168E-01	0.0000E+00
-65.90	2.8824E-01	1.6678E-01	0.0000E+00
-60.35	3.4899E-01	2.2899E-01	9.2010E-02
-55.49	4.2796E-01	3.1025E-01	1.0622E-01
-50.62	5.1885E-01	4.1571E-01	1.2484E-01
-47.17	5.9131E-01	5.1476E-01	1.4380E-01
-43.58	6.6762E-01	6.2658E-01	7.2991E-01
-38.45	7.7953E-01	7.6391E-01	8.1823E-01
-33.32	8.8417E-01	8.8146E-01	9.1785E-01
-28.20	9.7642E-01	9.7947E-01	9.6251E-01
-23.07	1.0552E+00	1.0613E+00	1.0385E+00
-17.94	1.1190E+00	1.1264E+00	1.1004E+00
-12.82	1.1668E+00	1.1743E+00	1.1199E+00
-7.69	1.1991E+00	1.2067E+00	1.1505E+00
-2.56	1.2153E+00	1.2233E+00	1.1660E+00
2.56	1.2152E+00	1.2240E+00	1.1736E+00
7.69	1.1984E+00	1.2079E+00	1.1575E+00
12.82	1.1647E+00	1.1750E+00	1.1254E+00
17.94	1.1144E+00	1.1258E+00	1.1155E+00
23.07	1.0464E+00	1.0571E+00	1.0482E+00
28.20	9.6163E-01	9.6967E-01	9.6453E-01
33.32	8.6175E-01	8.6457E-01	9.1586E-01
38.45	7.4798E-01	7.3872E-01	8.0193E-01
43.58	6.2643E-01	5.9388E-01	6.9373E-01
47.17	5.4446E-01	4.8131E-01	1.1368E-01
50.62	4.6818E-01	3.8365E-01	9.3287E-02
55.49	3.7287E-01	2.7997E-01	7.3144E-02
60.35	2.8779E-01	1.9859E-01	5.7510E-02
64.98	2.3233E-01	1.4877E-01	0.0000E+00
69.39	1.9824E-01	1.2155E-01	0.0000E+00
76.46	1.4938E-01	8.5086E-02	0.0000E+00
86.80	9.6194E-02	5.0394E-02	0.0000E+00
98.14	5.4746E-02	2.7066E-02	0.0000E+00
110.00	2.3229E-02	1.1943E-02	0.0000E+00

Table E11B-1.5. Fission Power Distribution by Pin in MFA-1 at EOC 11B-1

CORE POSITION 1404

0.945	0.950	0.954	0.958	0.962	0.966	0.969	0.972								
0.949	0.955	0.959	0.964	0.968	0.972	0.975	0.978	0.980							
0.954	0.959	0.964	0.969	0.973	0.977	0.980	0.983	0.986	0.989						
0.958	0.963	0.968	0.973	0.978	0.982	0.986	0.989	0.992	0.994	0.996					
0.961	0.967	0.972	0.977	0.982	0.986	0.990	0.994	0.996	0.999	1.001	1.003				
0.964	0.970	0.976	0.981	0.986	0.990	0.994	0.998	1.001	1.004	1.006	1.007	1.009			
0.967	0.973	0.979	0.985	0.990	0.994	0.998	1.002	1.005	1.008	1.010	1.012	1.013	1.014		
0.970	0.976	0.982	0.988	0.993	0.998	1.002	1.005	1.009	1.011	1.014	1.015	1.017	1.017	1.018	
0.979	0.985	0.991	0.996	1.001	1.005	1.009	1.012	1.015	1.017	1.019	1.020	1.021	1.021		
0.988	0.993	0.999	1.004	1.008	1.012	1.015	1.018	1.020	1.022	1.023	1.024	1.024			
0.996	1.001	1.006	1.011	1.015	1.018	1.021	1.023	1.025	1.026	1.027	1.027				
1.004	1.009	1.013	1.017	1.021	1.024	1.026	1.027	1.029	1.029	1.030					
1.011	1.016	1.020	1.023	1.026	1.028	1.030	1.031	1.032	1.032						
1.018	1.022	1.026	1.029	1.031	1.033	1.034	1.034	1.035							
1.024	1.028	1.031	1.033	1.035	1.036	1.037	1.037								

Table E11B-1.7. Fast Flux Distribution by Pin in MFA-1 at EOC 11B-1

CORE POSITION 1404

0.938	0.946	0.953	0.960	0.967	0.973	0.978	0.983										
0.942	0.950	0.958	0.965	0.971	0.978	0.983	0.988	0.993									
0.946	0.954	0.961	0.969	0.976	0.982	0.988	0.994	0.999	1.003								
0.949	0.957	0.964	0.972	0.979	0.986	0.992	0.998	1.003	1.008	1.013							
0.951	0.959	0.967	0.974	0.981	0.988	0.995	1.001	1.007	1.013	1.018	1.023						
0.952	0.960	0.968	0.976	0.983	0.990	0.997	1.004	1.010	1.016	1.022	1.028	1.033					
0.953	0.961	0.969	0.977	0.984	0.991	0.998	1.005	1.012	1.019	1.025	1.031	1.037	1.042				
0.953	0.961	0.969	0.977	0.984	0.991	0.999	1.006	1.013	1.020	1.027	1.034	1.040	1.046	1.052			
0.961	0.968	0.976	0.983	0.991	0.998	1.006	1.013	1.021	1.028	1.035	1.043	1.049	1.056				
0.967	0.975	0.982	0.989	0.997	1.004	1.012	1.020	1.028	1.036	1.043	1.051	1.058					
0.972	0.980	0.987	0.994	1.002	1.010	1.018	1.026	1.034	1.043	1.051	1.060						
0.977	0.984	0.991	0.999	1.007	1.015	1.023	1.032	1.041	1.050	1.059							
0.980	0.988	0.995	1.003	1.011	1.020	1.029	1.038	1.048	1.057								
0.983	0.990	0.998	1.006	1.015	1.024	1.034	1.044	1.054									
0.985	0.993	1.001	1.009	1.018	1.028	1.039	1.050										

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Table E11B-1.8. Fast Flux Distribution by Pin in MFA-2 at EOC 11B-1

CORE POSITION 2506

[illegible]

Table E11B-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 11B-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.0929E+15	2.2804E+15
SE	2.0158E+15	2.3310E+15
SW	2.0504E+15	2.1187E+15
W	2.1881E+15	1.8972E+15
NW	2.3113E+15	1.8601E+15
NE	2.1812E+15	2.0589E+15

Table E11B-1.10. Assembly Outlet Temperatures and
Flow Rates at EOC 11B-1

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE (LB/H)
	(DEG F)	
1404	1051	114690
1303	1015	69040
1304	1049	200400
1403	881	207670
1405	877	207700
1505	893	197480
1506	879	207670
2506	1036	114690
2404	1025	204240
2405	1004	171220
2505	889	207670
2507	886	207670
2606	923	170310
2607	893	170310

Assembly flows are based on a calculated core pressure drop of 110.1 psi at a total reactor flow rate of 16.74E+06 lb/hr.

▶ <https://doi.org/10.1002/anie.201910000>

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Table E11B-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 11B-1

[illegible]

Table E11B-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 11B-1

1 temperature map for bundle 51		ASSEMBLY NO. 2586		MFA-2	
axial height 59.500 in		932		932	
946	946	935	935	934	932
969	969	953	953	952	951
971	971	967	967	966	965
975	975	970	970	969	968
978	978	976	976	975	974
980	980	981	981	980	979
982	982	984	984	983	982
983	983	985	985	984	983
984	984	986	986	985	984
985	985	987	987	986	985
986	986	988	988	987	986
987	987	989	989	988	987
988	988	990	990	989	988
989	989	991	991	990	989
990	990	992	992	991	990
991	991	993	993	992	991
992	992	994	994	993	992
993	993	995	995	994	993
994	994	996	996	995	994
995	995	997	997	996	995
996	996	998	998	997	996
997	997	999	999	998	997
998	998	1000	1000	999	998
999	999	1001	1001	1000	999
1000	1000	1002	1002	1001	1000
1001	1001	1003	1003	1002	1001
1002	1002	1004	1004	1003	1002
1003	1003	1005	1005	1004	1003
1004	1004	1006	1006	1005	1004
1005	1005	1007	1007	1006	1005
1006	1006	1008	1008	1007	1006
1007	1007	1009	1009	1008	1007
1008	1008	1010	1010	1009	1008
1009	1009	1011	1011	1010	1009
1010	1010	1012	1012	1011	1010
1011	1011	1013	1013	1012	1011
1012	1012	1014	1014	1013	1012
1013	1013	1015	1015	1014	1013
1014	1014	1016	1016	1015	1014
1015	1015	1017	1017	1016	1015
1016	1016	1018	1018	1017	1016
1017	1017	1019	1019	1018	1017
1018	1018	1020	1020	1019	1018
1019	1019	1021	1021	1020	1019
1020	1020	1022	1022	1021	1020
1021	1021	1023	1023	1022	1021
1022	1022	1024	1024	1023	1022
1023	1023	1025	1025	1024	1023
 					

Table E11B-1.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 11B-1

1 temperature map for bundle 23 axial height 32.000 in	912	ASSEMBLY NO. 1404 MFA-1									
		918	921	923	925	926	927	928	900		
		947	953	956	957	958	959	959	958	951	
			942	946	949	991	991	991	998	991	993
				997	1006	1010	1012	1011	1009	1004	
	932	957	981	995	1010	1019	1022	1023	1021	1015	1007
									998	959	919
	932	956	963	1002	1026	1043	1052	1055	1054	1046	1035
									1017	1003	963
	932	958	984	1006	1037	1059	1072	1078	1080	1077	1067
									1046	1023	1006
											966
	931	959	986	1009	1042	1068	1084	1092	1096	1095	1090
									1078	1055	1027
									1008		969
	930	959	987	1009	1043	1072	1099	1099	1104	1105	1104
									1097	1062	1057
									1028	1018	971
	928	958	987	1006	1040	1071	1093	1102	1108	1110	1111
									1100	1103	1099
									1067	1037	
									1083	1056	1027
									1013		973
									1034		
	925	955	985	998	1030	1064	1088	1102	1109	1112	1114
									1113	1109	1099
	911	947	961	991	1020	1055	1086	1103	1110	1114	1115
									1115	1111	1100
	926	954	981	1011	1047	1078	1097	1108	1113	1115	1113
									1106	1091	1086
									1033		
	927	955	983	1005	1042	1075	1096	1107	1113	1115	1116
									1113	1105	1080
									1063	1037	1027
									1047		1020
									1013		
	929	957	986	1010	1040	1070	1099	1108	1113	1114	1113
									1106	1091	1087
									1058		
									1021	1015	
	930	960	988	1014	1051	1088	1097	1105	1108	1100	1102
									1089	1060	1042
									1026		1021
									1016		
									1058		
	931	961	991	1015	1049	1074	1098	1094	1095	1092	1084
									1048	1024	1021
									1017		
									1046		
	931	962	992	1013	1041	1059	1069	1073	1073	1067	1054
									1036	1022	1019
									1017		
									1039		
	931	962	991	1007	1024	1035	1041	1044	1044	1039	1029
									1020		1018
									1016		
									1028		
									1019	1019	
									1016		
									1017		
	976								1015	1017	1017
									1015		
	961								1015	1015	1014

[illegible]

Table EllB-1.17. Composition of MFA-1 at EOC 11B-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.0147E-05
			U-238	7.0573E-03	6.8276E-03
			Pu-239	0.0000E+00	1.8778E-04
			Pu-240	0.0000E+00	8.7336E-06
			FP	0.0000E+00	3.5874E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	8.0210E-06
			U-238	4.4499E-03	4.2757E-03
			Pu-239	1.7520E-03	1.4323E-03
			Pu-240	2.2340E-04	2.8424E-04
			Pu-241	1.9280E-05	2.4175E-05
			Pu-242	4.7430E-06	5.1940E-06
			Am-241	7.6680E-07	2.6996E-06
			FP	0.0000E+00	4.2713E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	7.4593E-06
			U-238	4.4499E-03	4.2310E-03
			Pu-239	1.7520E-03	1.3577E-03
			Pu-240	2.2340E-04	2.8674E-04
			Pu-241	1.9280E-05	2.4535E-05
			Pu-242	4.7430E-06	5.2116E-06
			Am-241	7.6680E-07	2.6375E-06
			FP	0.0000E+00	5.4400E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	7.1596E-06
			U-238	4.4499E-03	4.2081E-03
			Pu-239	1.7520E-03	1.3216E-03
			Pu-240	2.2340E-04	2.9107E-04
			Pu-241	1.9280E-05	2.5266E-05
			Pu-242	4.7430E-06	5.2750E-06
			Am-241	7.6680E-07	2.6285E-06
			FP	0.0000E+00	5.9836E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	7.2644E-06
			U-238	4.4499E-03	4.2161E-03
			Pu-239	1.7520E-03	1.3336E-03
			Pu-240	2.2340E-04	2.8920E-04
			Pu-241	1.9280E-05	2.4958E-05
			Pu-242	4.7430E-06	5.2479E-06
			Am-241	7.6680E-07	2.6309E-06
			FP	0.0000E+00	5.8016E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	7.7581E-06
			U-238	4.4499E-03	4.2536E-03
			Pu-239	1.7520E-03	1.3923E-03
			Pu-240	2.2340E-04	2.8106E-04
			Pu-241	1.9280E-05	2.3670E-05
			Pu-242	4.7430E-06	5.1404E-06
			Am-241	7.6680E-07	2.6440E-06
			FP	0.0000E+00	4.9337E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	8.4963E-06
			U-238	4.4499E-03	4.3077E-03
			Pu-239	1.7520E-03	1.4853E-03
			Pu-240	2.2340E-04	2.7295E-04
			Pu-241	1.9280E-05	2.2538E-05
			Pu-242	4.7430E-06	5.0663E-06
			Am-241	7.6680E-07	2.6969E-06
			FP	0.0000E+00	3.5497E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.1431E-05
			U-238	7.0573E-03	6.9021E-03
			Pu-239	0.0000E+00	1.3198E-04
			Pu-240	0.0000E+00	3.7147E-06
			FP	0.0000E+00	2.1337E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11B-1.18. Composition of MFA-2 at EOC 11B-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	1.0099E-05
			U-238	7.0573E-03	6.8293E-03
			Pu-239	0.0000E+00	1.8582E-04
			Pu-240	0.0000E+00	8.9796E-06
			FP	0.0000E+00	3.5892E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	7.5263E-06
			U-238	4.4270E-03	4.2542E-03
			Pu-239	1.7483E-03	1.4276E-03
			Pu-240	2.2290E-04	2.8266E-04
			Pu-241	1.9040E-05	2.3918E-05
			Pu-242	4.7330E-06	5.1674E-06
			Am-241	7.5700E-07	2.6907E-06
			FP	0.0000E+00	4.2756E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	6.9789E-06
			U-238	4.4270E-03	4.2078E-03
			Pu-239	1.7483E-03	1.3500E-03
			Pu-240	2.2290E-04	2.8510E-04
			Pu-241	1.9040E-05	2.4259E-05
			Pu-242	4.7330E-06	5.1816E-06
			Am-241	7.5700E-07	2.6300E-06
			FP	0.0000E+00	5.4967E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	6.6804E-06
			U-238	4.4270E-03	4.1831E-03
			Pu-239	1.7483E-03	1.3113E-03
			Pu-240	2.2290E-04	2.8969E-04
			Pu-241	1.9040E-05	2.5037E-05
			Pu-242	4.7330E-06	5.2483E-06
			Am-241	7.5700E-07	2.6236E-06
			FP	0.0000E+00	6.0765E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	6.7667E-06
			U-238	4.4270E-03	4.1901E-03
			Pu-239	1.7483E-03	1.3220E-03
			Pu-240	2.2290E-04	2.8805E-04
			Pu-241	1.9040E-05	2.4768E-05
			Pu-242	4.7330E-06	5.2244E-06
			Am-241	7.5700E-07	2.6250E-06
			FP	0.0000E+00	5.9163E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	7.2198E-06
			U-238	4.4270E-03	4.2270E-03
			Pu-239	1.7483E-03	1.3797E-03
			Pu-240	2.2290E-04	2.8033E-04
			Pu-241	1.9040E-05	2.3527E-05
			Pu-242	4.7330E-06	5.1220E-06
			Am-241	7.5700E-07	2.6343E-06
			FP	0.0000E+00	5.0599E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	7.9012E-06
			U-238	4.4270E-03	4.2812E-03
			Pu-239	1.7483E-03	1.4723E-03
			Pu-240	2.2290E-04	2.7330E-04
			Pu-241	1.9040E-05	2.2542E-05
			Pu-242	4.7330E-06	5.0610E-06
			Am-241	7.5700E-07	2.6845E-06
			FP	0.0000E+00	3.6677E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.1192E-05
			U-238	7.0573E-03	6.8922E-03
			Pu-239	0.0000E+00	1.3937E-04
			Pu-240	0.0000E+00	4.4735E-06
			FP	0.0000E+00	2.3461E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.12 Cycle 11B-2

Table B11B-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11B-2

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE		TOTAL PWR
1405	8.611E-02	3.818E+00	4.807E-02		3.952E+00
1304	0.000E+00	7.376E+00	0.000E+00		7.376E+00
1406	0.000E+00	0.000E+00	0.000E+00		0.000E+00
1404	0.000E+00	6.381E+00	0.000E+00		6.381E+00
1508	0.000E+00	5.184E+00	0.000E+00		5.184E+00
1506	1.198E-02	3.769E+00	7.625E-03		3.789E+00
1507	1.099E-02	3.237E+00	7.404E-03		3.256E+00
2506	7.776E-02	3.512E+00	4.595E-02		3.635E+00
2404	0.000E+00	6.547E+00	0.000E+00		6.547E+00
2505	1.479E-02	3.617E+00	7.584E-03		3.640E+00
2405	9.743E-03	5.080E+00	7.258E-03		5.097E+00
2606	1.351E-02	3.416E+00	7.226E-03		3.437E+00
2607	1.207E-02	3.053E+00	7.700E-03		3.072E+00
2507	1.137E-02	3.694E+00	8.269E-03		3.713E+00

Table B11B-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11B-2

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.382E+15	2.256E+15
MFA-2	2506	3.108E+15	2.024E+15

Table B11B-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8759E-02	1.4378E-02	0.0000E+00
-92.78	6.1805E-02	2.7849E-02	0.0000E+00
-87.78	9.9166E-02	4.4689E-02	0.0000E+00
-82.78	1.4377E-01	6.6884E-02	0.0000E+00
-77.78	1.9881E-01	9.6932E-02	0.0000E+00
-72.15	2.6200E-01	1.3615E-01	0.0000E+00
-65.90	3.2639E-01	1.8663E-01	0.0000E+00
-60.35	3.9385E-01	2.5564E-01	1.0401E-01
-55.49	4.7902E-01	3.4419E-01	1.1900E-01
-50.62	5.7502E-01	4.5766E-01	1.3848E-01
-47.17	6.4931E-01	5.6211E-01	1.5781E-01
-43.58	7.2638E-01	6.7913E-01	7.9699E-01
-38.45	8.3965E-01	8.2107E-01	8.8159E-01
-33.32	9.4483E-01	9.4094E-01	9.7925E-01
-28.20	1.0358E+00	1.0388E+00	1.0206E+00
-23.07	1.1107E+00	1.1175E+00	1.0922E+00
-17.94	1.1677E+00	1.1763E+00	1.1471E+00
-12.82	1.2058E+00	1.2148E+00	1.1579E+00
-7.69	1.2255E+00	1.2348E+00	1.1764E+00
-2.56	1.2270E+00	1.2366E+00	1.1776E+00
2.56	1.2109E+00	1.2211E+00	1.1706E+00
7.69	1.1781E+00	1.1887E+00	1.1389E+00
12.82	1.1294E+00	1.1405E+00	1.0922E+00
17.94	1.0663E+00	1.0778E+00	1.0684E+00
23.07	9.8859E-01	9.9888E-01	9.9132E-01
28.20	8.9758E-01	9.0503E-01	9.0140E-01
33.32	7.9533E-01	7.9742E-01	8.4609E-01
38.45	6.8326E-01	6.7397E-01	7.3344E-01
43.58	5.6713E-01	5.3680E-01	6.2804E-01
47.17	4.9231E-01	4.3551E-01	9.9219E-02
50.62	4.2605E-01	3.5110E-01	8.1484E-02
55.49	3.4576E-01	2.6248E-01	6.4358E-02
60.35	2.7365E-01	1.9181E-01	5.1241E-02
64.98	2.2342E-01	1.4577E-01	0.0000E+00
69.39	1.9011E-01	1.1851E-01	0.0000E+00
76.46	1.4212E-01	8.1832E-02	0.0000E+00
86.80	9.1567E-02	4.8087E-02	0.0000E+00
98.14	5.2687E-02	2.5845E-02	0.0000E+00
110.00	2.2472E-02	1.1398E-02	0.0000E+00

Table B11B-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7763E-02	1.4142E-02	0.0000E+00
-92.78	5.9557E-02	2.7301E-02	0.0000E+00
-87.78	9.5445E-02	4.3686E-02	0.0000E+00
-82.78	1.3827E-01	6.5189E-02	0.0000E+00
-77.78	1.9117E-01	9.4200E-02	0.0000E+00
-72.15	2.5227E-01	1.3205E-01	0.0000E+00
-65.90	3.1459E-01	1.8085E-01	0.0000E+00
-60.35	3.7962E-01	2.4800E-01	1.0175E-01
-55.49	4.6422E-01	3.3549E-01	1.1665E-01
-50.62	5.6116E-01	4.4874E-01	1.3608E-01
-47.17	6.3802E-01	5.5465E-01	1.5588E-01
-43.58	7.1869E-01	6.7396E-01	7.8858E-01
-38.45	8.3602E-01	8.1870E-01	8.7884E-01
-33.32	9.4401E-01	9.4044E-01	9.8086E-01
-28.20	1.0366E+00	1.0393E+00	1.0227E+00
-23.07	1.1126E+00	1.1185E+00	1.0957E+00
-17.94	1.1700E+00	1.1774E+00	1.1513E+00
-12.82	1.2080E+00	1.2155E+00	1.1600E+00
-7.69	1.2272E+00	1.2349E+00	1.1780E+00
-2.56	1.2277E+00	1.2359E+00	1.1783E+00
2.56	1.2107E+00	1.2197E+00	1.1694E+00
7.69	1.1770E+00	1.1866E+00	1.1369E+00
12.82	1.1280E+00	1.1384E+00	1.0898E+00
17.94	1.0649E+00	1.0762E+00	1.0658E+00
23.07	9.8773E-01	9.9830E-01	9.8924E-01
28.20	8.9760E-01	9.0573E-01	9.0015E-01
33.32	7.9657E-01	7.9993E-01	8.4640E-01
38.45	6.8583E-01	6.7829E-01	7.3528E-01
43.58	5.7084E-01	5.4235E-01	6.3283E-01
47.17	4.9499E-01	4.3880E-01	1.0377E-01
50.62	4.2480E-01	3.4920E-01	8.5116E-02
55.49	3.3790E-01	2.5461E-01	6.6803E-02
60.35	2.6067E-01	1.8064E-01	5.2621E-02
64.98	2.1042E-01	1.3539E-01	0.0000E+00
69.39	1.7962E-01	1.1069E-01	0.0000E+00
76.46	1.3558E-01	7.7655E-02	0.0000E+00
86.80	8.7838E-02	4.6195E-02	0.0000E+00
98.14	5.0651E-02	2.5004E-02	0.0000E+00
110.00	2.1754E-02	1.1130E-02	0.0000E+00

Table B11B-2.5. Fission Power Distribution by Pin in MFA-1 at BOC 11B-2

CORE POSITION 1405

[illegible]

Table B11B-2.6. Fission Power Distribution by Pin in MFA-2 at BOC 11B-2

CORE POSITION 2506

[illegible]

Table B11B-2.7. Fast Flux Distribution by Pin in MFA-1 at BOC 11B-2

CORE POSITION 1404

	0.925	0.926	0.927	0.927	0.927	0.927	0.927	0.927	0.927	
	0.936	0.937	0.938	0.939	0.939	0.939	0.938	0.938	0.937	
	0.948	0.949	0.950	0.950	0.950	0.950	0.949	0.948	0.947	0.946
	0.960	0.961	0.962	0.962	0.962	0.961	0.960	0.959	0.957	0.956 0.953
	0.972	0.973	0.974	0.974	0.973	0.973	0.971	0.970	0.968	0.965 0.963 0.960
	0.983	0.985	0.986	0.986	0.985	0.984	0.983	0.981	0.978	0.976 0.972 0.969 0.965
	0.995	0.997	0.998	0.998	0.997	0.996	0.995	0.992	0.990	0.986 0.982 0.978 0.974 0.969
1.007	1.009	1.010	1.010	1.010	1.009	1.007	1.004	1.001	0.997	0.993 0.988 0.983 0.977 0.971
	1.021	1.023	1.023	1.023	1.021	1.019	1.016	1.013	1.009	1.004 0.998 0.992 0.986 0.979
	1.035	1.036	1.035	1.034	1.032	1.029	1.025	1.021	1.015	1.009 1.003 0.996 0.988
	1.048	1.048	1.047	1.045	1.042	1.038	1.033	1.028	1.021	1.014 1.006 0.998
	1.061	1.060	1.058	1.055	1.051	1.047	1.041	1.034	1.026	1.017 1.008
	1.073	1.071	1.069	1.065	1.060	1.054	1.047	1.039	1.030	1.020
	1.084	1.082	1.079	1.074	1.068	1.060	1.052	1.043	1.032	
	1.095	1.092	1.087	1.081	1.074	1.066	1.056	1.046		

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Table B11B-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11B-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.3793E+15	2.2245E+15
SE	2.1408E+15	2.2631E+15
SW	2.0410E+15	2.0069E+15
W	2.1304E+15	1.7854E+15
NW	2.2338E+15	1.7720E+15
NE	2.4536E+15	1.9867E+15

Table B11B-2.10. Assembly Outlet Temperatures and
Flow Rates at BOC 11B-2

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE
	(DEG F)	(LB/H)
1405	1058	111160
1304	1078	194240
1404	1020	196630
1406	860	14170
1506	888	201290
1507	869	191410
1508	978	181190
2506	1031	111160
2404	1029	197960
2405	1010	165960
2505	877	201290
2507	885	201290
2606	906	165070
2607	888	165070

Assembly flows are based on a calculated core pressure drop of 103.4 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B11B-2.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 11B-2

temperature map for bundle 24		ASSEMBLY NO. 1405		MFA-1															
axial height 44.888 in																			
871		882	866	887	888	887	887	981											
984		914	917	917	917	917	916	915	924										
		937	944	947	946	945	944	943	946										
889	914	938	996	1036	1037	1038	1037	1034	1028	1000	953	944	935						
		1031	1062	1069	1063	1063	1065	1065	1053	1031									
892	918	943	1012	1063	1077	1080	1079	1078	1074	1069	1015	959	949	940					
		1041	1079	1096	1082	1091	1098	1087	1075	1041									
895	921	947	1018	1073	1091	1095	1095	1095	1093	1088	1078	1021	951	952	944				
		1046	1086	1098	1100	1100	1100	1098	1095	1082	1045								
897	924	951	1022	1078	1097	1102	1103	1102	1101	1099	1094	1075	1023	961	954	947			
		1049	1098	1183	1105	1106	1105	1105	1103	1099	1086	1047							
898	927	954	1025	1082	1101	1106	1107	1107	1105	1103	1097	1078	1025	961	955	949			
		1051	1093	1106	1109	1110	1110	1109	1108	1107	1102	1089	1049						
899	928	956	1025	1084	1104	1110	1111	1111	1110	1109	1107	1100	1080	1024	960	955	950		
		1047	1093	1108	1113	1114	1114	1114	1113	1112	1110	1105	1089	1044					
898	927	955	1013	1079	1106	1113	1115	1115	1115	1114	1112	1110	1102	1076	1013	958	954	950	
916	933	958	1014	1081	1108	1115	1117	1118	1119	1117	1116	1115	1112	1104	1079	1016	958	942	925
952	954	955	1050	1098	1113	1118	1119	1119	1119	1118	1117	1115	1110	1095	1049				
		957	959	961	1031	1092	1114	1119	1121	1121	1120	1119	1117	1111	1098	1033	978	942	913
		1068	1104	1118	1121	1122	1122	1122	1121	1120	1116	1110	1102	1060					
968	964	967	1090	1097	1117	1123	1124	1124	1124	1124	1123	1121	1116	1095	1039	972	943	913	
		1065	1100	1121	1125	1125	1125	1125	1124	1120	1105	1065							
963	967	972	1042	1100	1121	1126	1127	1127	1126	1125	1119	1099	1042	974	944	914			
		1069	1111	1124	1127	1127	1127	1127	1126	1123	1118	1068							
965	978	976	1045	1103	1122	1126	1127	1127	1126	1121	1101	1044	974	945	914				
		1071	1111	1123	1125	1125	1125	1122	1111	1078									
965	972	978	1046	1098	1114	1117	1117	1117	1113	1087	1044	975	945	915					
		1067	1099	1107	1108	1108	1107	1097	1069	1066									
965	971	977	1034	1068	1076	1078	1078	1077	1078	1033	975	947	918						
		1035	1048	1052	1054	1054	1052	1037											
		973	975	988	963	986	988	988	985	977									
		978	992	905	967	980	987	994	954										
		972	978	982	905	987	988	987	984	954									
		970		981	984	986	987	987	987	984									

Table B11B-2.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 11B-2

1	temperature map for bundle 51	ASSEMBLY	NO. 2506	MFA-2
	axial height	44.066 in	914	
		889	889	886
		916	917	915
		912	909	906
		942	938	935
		943	944	936
		944	945	937
		946	946	938
		947	947	939
		948	948	940
		949	949	941
		950	950	942
		951	951	943
		952	952	944
		953	953	945
		954	954	946
		955	955	947
		956	956	948
		957	957	949
		958	958	950
		959	959	951
		960	960	952
		961	961	953
		962	962	954
		963	963	955
		964	964	956
		965	965	957
		966	966	958
		967	967	959
		968	968	960
		969	969	961
		970	970	962
		971	971	963
		972	972	964
		973	973	965
		974	974	966
		975	975	967
		976	976	968
		977	977	969
		978	978	970
		979	979	971
		980	980	972
		981	981	973
		982	982	974
		983	983	975
		984	984	976
		985	985	977
		986	986	978
		987	987	979
		988	988	980
		989	989	981
		990	990	982
		991	991	983
		992	992	984
		993	993	985
		994	994	986
		995	995	987
		996	996	988
		997	997	989
		998	998	990
		999	999	991
		1000	1000	992
		1001	1001	993
		1002	1002	994
		1003	1003	995
		1004	1004	996
		1005	1005	997
		1006	1006	998
		1007	1007	999
		1008	1008	1000
		1009	1009	1001
		1010	1010	1002
		1011	1011	1003
		1012	1012	1004
		1013	1013	1005
		1014	1014	1006
		1015	1015	1007
		1016	1016	1008
		1017	1017	1009
		1018	1018	1010
		1019	1019	1011
		1020	1020	1012
		1021	1021	1013
		1022	1022	1014
		1023	1023	1015
		1024	1024	1016
		1025	1025	1017
		1026	1026	1018
		1027	1027	1019
		1028	1028	1020
		1029	1029	1021
		1030	1030	1022
		1031	1031	1023
		1032	1032	1024
		1033	1033	1025
		1034	1034	1026
		1035	1035	1027
		1036	1036	1028
		1037	1037	1029
		1038	1038	1030
		1039	1039	1031
		1040	1040	1032
		1041	1041	1033
		1042	1042	1034
		1043	1043	1035
		1044	1044	1036
		1045	1045	1037
		1046	1046	1038
		1047	1047	1039
		1048	1048	1040
		1049	1049	1041
		1050	1050	1042
		1051	1051	1043
		1052	1052	1044
		1053	1053	1045
		1054	1054	1046
		1055	1055	1047
		1056	1056	1048
		1057	1057	1049
		1058	1058	1050
		1059	1059	1051
		1060	1060	1052
		1061	1061	1053
		1062	1062	1054
		1063	1063	1055
		1064	1064	1056
		1065	1065	1057
		1066	1066	1058
		1067	1067	1059
		1068	1068	1060
		1069	1069	1061
		1070	1070	1062
		1071	1071	1063
		1072	1072	1064
		1073	1073	1065
		1074	1074	1066
		1075	1075	1067
		1076	1076	1068
		1077	1077	1069
		1078	1078	1070
		1079	1079	1071
		1080	1080	1072
		1081	1081	1073
		1082	1082	1074
		1083	1083	1075
		1084	1084	1076
		1085	1085	1077
		1086	1086	1078
		1087	1087	1079
		1088	1088	1080
		1089	1089	1081
		1090	1090	1082
		1091	1091	1083
		1092	1092	1084
		1093	1093	1085
		1094	1094	1086
		1095	1095	1087
		1096	1096	1088
		1097	1097	1089
		1098	1098	1090
		1099	1099	1091
		1100	1100	1092
		1101	1101	1093
		1102	1102	1094
		1103	1103	1095
		1104	1104	1096
		1105	1105	1097
		1106	1106	1098
		1107	1107	1099
		1108	1108	1100
		1109	1109	1101
		1110	1110	1102
		1111	1111	1103
		1112	1112	1104
		1113	1113	1105
		1114	1114	1106
		1115	1115	1107
		1116	1116	1108
		1117	1117	1109
		1118	1118	1110
		1119	1119	1111
		1120	1120	1112
		1121	1121	1113
		1122	1122	1114
		1123	1123	1115
		1124	1124	1116
		1125	1125	1117
		1126	1126	1118
		1127	1127	1119
		1128	1128	1120
		1129	1129	1121
		1130	1130	1122
		1131	1131	1123
		1132	1132	1124
		1133	1133	1125
		1134	1134	1126
		1135	1135	1127
		1136	1136	1128
		1137	1137	1129
		1138	1138	1130
		1139	1139	1131
		1140	1140	1132
		1141	1141	1133
		1142	1142	1134
		1143	1143	1135
		1144	1144	1136
		1145	1145	1137
		1146	1146	1138
		1147	1147	1139
		1148	1148	1140
		1149	1149	1141
		1150	1150	1142
		1151	1151	1143
		1152	1152	1144
		1153	1153	1145
		1154	1154	1146
		1155	1155	1147
		1156	1156	1148
		1157	1157	1149
		1158	1158	1150
		1159	1159	1151
		1160	1160	1152
		1161	1161	1153
		1162	1162	1154
		1163	1163	1155
		1164	1164	1156
		1165	1165	1157
		1166	1166	1158
		1167	1167	1159
		1168	1168	1160
		1169	1169	1161
		1170	1170	1162
		1171	1171	1163
		1172	1172	1164
		1173	1173	1165
		1174	1174	1166
		1175	1175	1167
		1176	1176	1168
		1177	1177	1169
		1178	1178	1170
		1179	1179	1171
		1180	1180	1172
		1181	1181	1173
		1182	1182	1174
		1183	1183	1175
		1184	1184	1176
		1185	1185	1177
		1186	1186	1178
		1187	1187	1179
		1188	1188	1180
		1189	1189	1181
		1190	1190	1182
		1191	1191	1183
		1192	1192	1184
		1193	1193	1185
		1194	1194	1186
		1195	1195	1187
		1196	1196	1188
		1197	1197	1189
		1198	1198	1190
		1199	1199	1191
		1200	1200	1192

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Table B11B-2.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 11B-2

1 temperature map for bundle 51
axial height 50.508 in

ASSEMBLY NO. 2506 MFA-2

929 981 980 890 895 893 898 886

941 929 929 927 925 922 918 915 912

954 957 957 955 951 947 943 939 938

963 964 959 956 1023 1026 1022 1016 1006 977 944 925 995

974 969 965 1027 1056 1050 1054 1048 1036 1005

978 975 972 1022 1027 1005 1063 1079 1073 1066 1050 1010

981 979 978 1028 1078 1095 1056 1052 1066 1081 1074 1064 1039 986 941 925 989

983 983 983 1032 1062 1100 1101 1096 1090 1084 1079 1072 1061 1035 993 936 923 908

994 985 987 1033 1085 1104 1105 1108 1094 1087 1081 1075 1069 1057 1031 978 935 928 906

995 986 986 1021 1079 1105 1108 1104 1097 1091 1084 1078 1072 1065 1052 1021 965 933 918 903

997 975 963 1028 1088 1105 1106 1104 1097 1091 1084 1078 1072 1065 1052 1022 967 939 915 898

998 971 985 1032 1066 1105 1108 1094 1088 1081 1075 1069 1057 1032 982 944 919 894

999 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

995 972 987 1035 1085 1102 1102 1097 1091 1085 1078 1072 1061 1036 987 946 922 896

Table B11B-2.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 11B-2

1. temperature map for bundle 24 ASSEMBLY NO. 1485 MFA-1
axial height 92.608 in 980

915	918	921	923	925	927	929	940
945	950	954	957	958	960	962	964
961	965	969	991	992	994	995	997
996	1005	1010	1012	1011	1010	1007	
938	956	988	994	1018	1018	1022	1029
1016	1018	1006	988	978			
1000	1020	1039	1043	1048	1032	1021	
931	957	961	1002	1020	1044	1052	1053
1045	1045	1024	1028	1018	992	973	
1017	1044	1062	1070	1071	1069	1062	1049
1030	933	958	994	1000	1040	1062	1074
1078	1078	1074	1064	1047	1025	1012	994
976							
1023	1055	1076	1007	1091	1081	1006	1076
1059	1084	1087	1084	1087	1074	1053	1028
1013	996	979					
1026	1060	1004	1007	1103	1104	1102	1095
1004	1053	1037					
934	952	969	1013	1058	1070	1086	1104
1107	1106	1103	1035	1075	1055	1028	1013
981							
1025	1061	1007	1103	1109	1111	1111	1100
1081	1007	1064	1036				
953	903	990	1012	1049	1000	1089	1113
1113	1113	1112	1108	1088	1000	1053	1026
1014	998	992					
1020	1056	1005	1104	1113	1115	1112	1103
1005	1031						
934	962	990	1006	1040	1075	1089	1111
1117	1118	1118	1115	1110	1097	1075	1047
1023	1068	1098	1109	1118	1121	1122	1120
1117	1107	1090	1064	1036			
1002	1000	990	1019	1057	1006	1109	1119
1123	1122	1118	1107	1009	1061	1024	1024
1004	963						
1035	1072	1009	1114	1121	1124	1123	1121
1113	1098	1074	1045				
1005	1005	1004	1112	1121	1124	1123	1120
1111	1094	1069	1040	1027	1045	1030	1009
900	900	900	900	900	900	900	900
1010	1013	1015	1037	1060	1091	1103	1100
1104	1032	1071	1045	1030	1009	900	
1048	1075	1092	1101	1103	1101	1093	1077
1053							
1012	1015	1018	1037	1061	1077	1005	1009
1007	1000	1065	1044	1031	1011	1096	1072
1044	1029	1000	906				
1047	1070	1101	1112	1117	1117	1112	1101
1090	1063						
1012	1016	1020	1032	1046	1055	1060	1062
1050	1053	1041	1033	1014	995		
1033	1043	1049	1052	1053	1050	1043	
1020	1023	1027	1031	1034	1037	1030	1035
1021	1027	1030	1033	1036	1037	1030	1037
1026							
1021	1032	1034	1036	1037	1030	1030	1037
1017							

Table B11B-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 11B-2

Temperature map for bundle axial height	ASSEMBLY NO. 2506	WFA-2
51	957	926 926 925 923 921 919 918
52,000 in	966	951 950 949 947 944 942 941
		975 975 973 970 967 965 963 963
		991 996 997 994 998 994 976
	958 969	988 963 1004 1008 1004 998 993 977 966
		1009 1024 1030 1030 1026 1019 1087 969
	1002 994	986 1005 1026 1038 1041 1039 1033 1023 1007 984 968
		1021 1043 1055 1059 1056 1059 1039 1021 995
	1005 998	992 1014 1041 1058 1065 1064 1060 1051 1037 1015 986 968
		1029 1055 1078 1076 1075 1078 1061 1047 1025 996
	1008 1003	999 1021 1049 1069 1079 1088 1076 1078 1059 1042 1016 996 967
		1034 1061 1079 1005 1006 1001 1075 1065 1049 1025 994
	1010 1007	1084 1025 1054 1076 1077 1093 1086 1086 1072 1060 1041 1014 963 965
		1035 1063 1003 1032 1002 1000 1002 1075 1054 1046 1021 990
	1012 1010	1025 1054 1078 1098 1094 1091 1086 1079 1071 1058 1037 1009 979 964
		1031 1069 1002 1093 1095 1052 1007 1008 1072 1060 1040 1013 984
	1012 1011	1010 1021 1047 1074 1098 1096 1054 1098 1084 1077 1052 1029 939 974 964
	996 1002	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000
	984 997	1010 1021 1040 1074 1090 1095 1055 1090 1094 1077 1067 1052 1029 1008 975 968
		1032 1061 1003 1084 1096 1032 1087 1068 1072 1060 1041 1014 986
	904 990	1011 1027 1055 1079 1082 1094 1092 1005 1008 1071 1056 1030 1011 964 972
		1039 1065 1058 1033 1008 1062 1075 1064 1047 1023 964
	904 999	1013 1031 1059 1070 1080 1090 1095 1001 1073 1061 1042 1017 969 974
		1041 1066 1002 1005 1007 1082 1075 1065 1050 1027 999
	903 999	1015 1032 1057 1074 1002 1002 1070 1071 1000 1043 1019 991 975
		1040 1061 1074 1079 1077 1071 1063 1049 1027 1001
	901 990	1015 1030 1050 1054 1063 1067 1002 1054 1038 1018 992 976
		1035 1052 1061 1063 1068 1053 1042 1024 1008
	970 996	1014 1025 1039 1046 1040 1045 1039 1029 1012 990 976
		1027 1036 1039 1039 1035 1027 1014 996
	975 993	1011 1016 1021 1022 1021 1010 1012 1002 997 977
		1013 1014 1014 1011 1007 1000 998
		1007 1003 1001 990 996 993 990 995 909
	975	969 966 964 961 956 955 950
	943	933 931 928 926 922 919 915

Table E11B-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 11B-2

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1405	9.229E-02	3.655E+00	6.099E-02	3.808E+00
1304	0.000E+00	6.926E+00	0.000E+00	6.926E+00
1406	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1404	0.000E+00	6.129E+00	0.000E+00	6.129E+00
1508	0.000E+00	5.040E+00	0.000E+00	5.040E+00
1506	1.238E-02	3.678E+00	9.470E-03	3.700E+00
1507	1.127E-02	3.145E+00	8.980E-03	3.165E+00
2506	8.217E-02	3.367E+00	5.800E-02	3.507E+00
2404	0.000E+00	6.206E+00	0.000E+00	6.206E+00
2505	1.507E-02	3.648E+00	9.882E-03	3.673E+00
2405	1.110E-02	4.781E+00	9.380E-03	4.802E+00
2606	1.349E-02	3.396E+00	9.118E-03	3.419E+00
2607	1.202E-02	2.956E+00	9.207E-03	2.977E+00
2507	1.165E-02	3.518E+00	9.921E-03	3.540E+00

Table E11B-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 11B-2

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.398E+15	2.237E+15
MFA-2	2506	3.116E+15	2.002E+15

Table E11B-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 11B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6781E-02	1.3523E-02	0.0000E+00
-92.78	5.7582E-02	2.6196E-02	0.0000E+00
-87.78	9.2424E-02	4.2041E-02	0.0000E+00
-82.78	1.3407E-01	6.2927E-02	0.0000E+00
-77.78	1.8548E-01	9.1211E-02	0.0000E+00
-72.15	2.4455E-01	1.2814E-01	0.0000E+00
-65.90	3.0467E-01	1.7574E-01	0.0000E+00
-60.35	3.6746E-01	2.4107E-01	1.1865E-01
-55.49	4.4700E-01	3.2408E-01	1.3423E-01
-50.62	5.3672E-01	4.2988E-01	1.5372E-01
-47.17	6.0608E-01	5.2691E-01	1.7212E-01
-43.58	6.7809E-01	6.3563E-01	7.4882E-01
-38.45	7.8545E-01	7.6943E-01	8.3026E-01
-33.32	8.8697E-01	8.8429E-01	9.2545E-01
-28.20	9.7712E-01	9.8029E-01	9.5919E-01
-23.07	1.0546E+00	1.0608E+00	1.0331E+00
-17.94	1.1176E+00	1.1251E+00	1.0937E+00
-12.82	1.1651E+00	1.1726E+00	1.1090E+00
-7.69	1.1972E+00	1.2048E+00	1.1392E+00
-2.56	1.2135E+00	1.2215E+00	1.1546E+00
2.56	1.2136E+00	1.2224E+00	1.1647E+00
7.69	1.1969E+00	1.2065E+00	1.1489E+00
12.82	1.1633E+00	1.1738E+00	1.1172E+00
17.94	1.1132E+00	1.1249E+00	1.1163E+00
23.07	1.0452E+00	1.0562E+00	1.0491E+00
28.20	9.6026E-01	9.6868E-01	9.6548E-01
33.32	8.6025E-01	8.6340E-01	9.2831E-01
38.45	7.4638E-01	7.3711E-01	8.1309E-01
43.58	6.2533E-01	5.9244E-01	7.0350E-01
47.17	5.4622E-01	4.8359E-01	1.2672E-01
50.62	4.7555E-01	3.9245E-01	1.0665E-01
55.49	3.8825E-01	2.9541E-01	8.6388E-02
60.35	3.0880E-01	2.1710E-01	7.0190E-02
64.98	2.5315E-01	1.6552E-01	0.0000E+00
69.39	2.1587E-01	1.3485E-01	0.0000E+00
76.46	1.6175E-01	9.3410E-02	0.0000E+00
86.80	1.0412E-01	5.4978E-02	0.0000E+00
98.14	5.9538E-02	2.9483E-02	0.0000E+00
110.00	2.5210E-02	1.2942E-02	0.0000E+00

Table E11B-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 11B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.5769E-02	1.3247E-02	0.0000E+00
-92.78	5.5307E-02	2.5576E-02	0.0000E+00
-87.78	8.8670E-02	4.0929E-02	0.0000E+00
-82.78	1.2852E-01	6.1083E-02	0.0000E+00
-77.78	1.7777E-01	8.8273E-02	0.0000E+00
-72.15	2.3470E-01	1.2377E-01	0.0000E+00
-65.90	2.9264E-01	1.6959E-01	0.0000E+00
-60.35	3.5287E-01	2.3291E-01	1.1431E-01
-55.49	4.3150E-01	3.1460E-01	1.2957E-01
-50.62	5.2158E-01	4.1978E-01	1.4870E-01
-47.17	5.9292E-01	5.1776E-01	1.6738E-01
-43.58	6.6785E-01	6.2808E-01	7.3710E-01
-38.45	7.7840E-01	7.6371E-01	8.2333E-01
-33.32	8.8197E-01	8.7974E-01	9.2213E-01
-28.20	9.7329E-01	9.7620E-01	9.5667E-01
-23.07	1.0516E+00	1.0570E+00	1.0318E+00
-17.94	1.1151E+00	1.1215E+00	1.0932E+00
-12.82	1.1629E+00	1.1690E+00	1.1075E+00
-7.69	1.1955E+00	1.2017E+00	1.1382E+00
-2.56	1.2124E+00	1.2190E+00	1.1542E+00
2.56	1.2132E+00	1.2207E+00	1.1641E+00
7.69	1.1975E+00	1.2059E+00	1.1492E+00
12.82	1.1650E+00	1.1747E+00	1.1185E+00
17.94	1.1161E+00	1.1275E+00	1.1180E+00
23.07	1.0494E+00	1.0605E+00	1.0520E+00
28.20	9.6574E-01	9.7473E-01	9.6952E-01
33.32	8.6697E-01	8.7133E-01	9.3331E-01
38.45	7.5399E-01	7.4641E-01	8.1925E-01
43.58	6.3311E-01	6.0218E-01	7.1191E-01
47.17	5.5196E-01	4.8993E-01	1.3183E-01
50.62	4.7624E-01	3.9230E-01	1.1075E-01
55.49	3.8085E-01	2.8788E-01	8.9068E-02
60.35	2.9517E-01	2.0532E-01	7.1497E-02
64.98	2.3924E-01	1.5431E-01	0.0000E+00
69.39	2.0459E-01	1.2637E-01	0.0000E+00
76.46	1.5463E-01	8.8834E-02	0.0000E+00
86.80	9.9902E-02	5.2842E-02	0.0000E+00
98.14	5.7002E-02	2.8460E-02	0.0000E+00
110.00	2.4224E-02	1.2571E-02	0.0000E+00

Table E11B-2.5. Fission Power Distribution by Pin in MFA-1 at EOC 11B-2

CORE POSITION 1405

[illegible]

Table E11B-2.6. Fission Power Distribution by Pin in MFA-2 at EOC 11B-2

CORE POSITION 2506

	1.046	1.036	1.025	1.014	1.001	0.988	0.975	0.960						
	1.052	1.042	1.031	1.020	1.008	0.995	0.982	0.968	0.953					
	1.059	1.048	1.038	1.026	1.014	1.002	0.988	0.974	0.960	0.945				
	1.065	1.055	1.044	1.033	1.021	1.008	0.995	0.981	0.966	0.951	0.936			
	1.071	1.061	1.050	1.039	1.027	1.014	1.001	0.987	0.973	0.958	0.943	0.927		
	1.078	1.067	1.056	1.045	1.033	1.020	1.007	0.993	0.979	0.964	0.949	0.934	0.918	
	1.084	1.073	1.062	1.051	1.039	1.026	1.013	0.999	0.985	0.970	0.955	0.940	0.924	0.908
1.090	1.079	1.068	1.057	1.045	1.032	1.019	1.005	0.991	0.976	0.961	0.946	0.930	0.914	0.898
	1.085	1.074	1.062	1.050	1.037	1.024	1.011	0.996	0.982	0.967	0.951	0.936	0.920	0.904
	1.080	1.068	1.056	1.043	1.030	1.016	1.002	0.987	0.972	0.957	0.941	0.926	0.910	
	1.073	1.061	1.048	1.035	1.021	1.007	0.992	0.978	0.962	0.947	0.931	0.915		
	1.066	1.053	1.040	1.026	1.012	0.997	0.983	0.967	0.952	0.936	0.920			
	1.057	1.044	1.030	1.016	1.002	0.987	0.972	0.957	0.941	0.925				
	1.048	1.035	1.021	1.006	0.992	0.977	0.961	0.946	0.930					
	1.039	1.025	1.010	0.996	0.981	0.966	0.950	0.934						

Table E11B-2.7. Fast Flux Distribution by Pin in MFA-1 at EOC 11B-2

CORE POSITION 1404

			0.926	0.927	0.928	0.928	0.929	0.929	0.929	0.929	0.929			
			0.938	0.939	0.939	0.940	0.940	0.940	0.940	0.939	0.939			
			0.950	0.951	0.951	0.951	0.951	0.951	0.950	0.950	0.949	0.948		
			0.962	0.962	0.963	0.963	0.962	0.962	0.961	0.960	0.959	0.957	0.956	
			0.974	0.974	0.975	0.974	0.974	0.973	0.972	0.970	0.969	0.967	0.965	0.962
			0.986	0.986	0.986	0.986	0.985	0.984	0.983	0.981	0.979	0.976	0.974	0.971
			0.998	0.998	0.999	0.998	0.997	0.996	0.994	0.992	0.990	0.987	0.983	0.980
1.010	1.011	1.011	1.011	1.011	1.010	1.008	1.006	1.004	1.001	0.997	0.993	0.989	0.984	0.979
			1.023	1.023	1.023	1.022	1.020	1.018	1.015	1.012	1.008	1.004	0.999	0.993
			1.036	1.036	1.035	1.033	1.031	1.028	1.024	1.020	1.015	1.009	1.003	0.997
			1.048	1.047	1.046	1.043	1.040	1.036	1.032	1.026	1.020	1.014	1.006	0.999
			1.060	1.059	1.056	1.053	1.049	1.044	1.038	1.032	1.025	1.017	1.009	
			1.071	1.069	1.066	1.062	1.057	1.051	1.044	1.037	1.028	1.019		
			1.082	1.079	1.075	1.070	1.064	1.057	1.049	1.041	1.031			
			1.092	1.088	1.083	1.078	1.071	1.063	1.053	1.044				

Table E11B-2.8. Fast Flux Distribution by Pin in MFA-2 at EOC 11B-2

CORE POSITION 2506

	1.073	1.055	1.037	1.019	1.000	0.982	0.963	0.945						
	1.082	1.064	1.046	1.028	1.010	0.992	0.973	0.955	0.936					
	1.090	1.073	1.055	1.037	1.019	1.001	0.983	0.964	0.946	0.927				
	1.097	1.080	1.063	1.045	1.028	1.010	0.992	0.974	0.955	0.937	0.918			
	1.104	1.087	1.070	1.053	1.035	1.018	1.000	0.982	0.964	0.946	0.927	0.908		
	1.109	1.093	1.077	1.060	1.043	1.025	1.008	0.990	0.972	0.954	0.936	0.917	0.898	
	1.114	1.099	1.083	1.066	1.049	1.032	1.015	0.997	0.980	0.962	0.944	0.925	0.906	0.887
1.119	1.104	1.088	1.072	1.055	1.039	1.021	1.004	0.987	0.969	0.951	0.933	0.914	0.895	0.875
	1.108	1.093	1.077	1.061	1.044	1.028	1.011	0.993	0.976	0.958	0.940	0.921	0.902	0.883
	1.097	1.082	1.066	1.050	1.033	1.017	0.999	0.982	0.964	0.946	0.928	0.909	0.890	
	1.086	1.071	1.055	1.039	1.022	1.005	0.988	0.970	0.952	0.934	0.915	0.896		
	1.075	1.059	1.043	1.027	1.010	0.993	0.976	0.958	0.940	0.921	0.902			
	1.063	1.048	1.032	1.015	0.998	0.981	0.963	0.945	0.927	0.908				
	1.052	1.036	1.020	1.003	0.986	0.969	0.951	0.932	0.913					
	1.040	1.024	1.008	0.991	0.973	0.955	0.937	0.918						

Table E11B-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 11B-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.3605E+15	2.1837E+15
SE	2.1303E+15	2.2372E+15
SW	2.0275E+15	2.0132E+15
W	2.1205E+15	1.7862E+15
NW	2.2196E+15	1.7506E+15
NE	2.4228E+15	1.9510E+15

Table E11B-2.10. Assembly Outlet Temperatures and
Flow Rates at EOC 11B-2

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1405	1044	111160
1304	1052	194240
1404	1005	196630
1406	857	14170
1506	883	201290
1507	863	191410
1508	970	181190
2506	1020	111160
2404	1011	197960
2405	990	165960
2505	879	201290
2507	875	201290
2606	906	165070
2607	881	165070

Assembly flows are based on a calculated core pressure drop of 103.4 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E11B-2.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 11B-2

1	Temperature map for bundle 24	ASSEMBLY NO. 1405	MFA-1
	axial height		
885	876	879	880 881 881 881 880 894
887	886	889	910 988 989 988 987 916
	928	935	930 930 937 936 935 934 937
882	906	929	985 1000 1002 1001 1000 997 995
	1018	1049	1055 1056 1055 1053 1046 1019
885	910	934	1000 1043 1063 1066 1065 1064 1061 1047 1004 949
	1028	1065	1075 1077 1077 1076 1073 1053 1029
888	913	930	1006 1055 1077 1001 1001 1006 1075 1074 1057 1009 952
	1033	1072	1063 1086 1086 1085 1084 1080 1083 1033
890	916	942	1010 1064 1082 1007 1080 1087 1086 1085 1079 1061 1012 952
	1036	1076	1089 1090 1091 1090 1090 1088 1095 1072 1035
891	910	945	1013 1066 1086 1031 1032 1032 1031 1031 1009 1003 1065 1014 952
	1038	1079	1091 1094 1095 1095 1094 1093 1092 1080 1075 1037
892	920	947	1013 1078 1089 1095 1096 1096 1095 1094 1092 1086 1067 1013 951
	1034	1079	1094 1097 1098 1098 1098 1097 1095 1091 1076 1033
891	919	946	1082 1096 1097 1099 1100 1095 1095 1096 1097 1095 1088 1063 1082 948
941	943	945	1082 1087 1092 1100 1101 1102 1102 1101 1101 1100 1098 1096 1066 1085 956
	1037	1083	1099 1102 1103 1103 1103 1102 1102 1100 1096 1081 1037
945	948	951	1019 1077 1098 1103 1105 1105 1105 1104 1102 1096 1076 1021 960
	1047	1089	1102 1105 1106 1106 1106 1106 1104 1101 1089 1046
948	952	957	1082 1101 1106 1108 1108 1108 1107 1106 1101 1081 1027 963
	1051	1092	1105 1108 1109 1109 1109 1108 1105 1092 1052
950	956	961	1029 1095 1104 1109 1110 1110 1109 1109 1104 1085 1030 964
	1055	1095	1107 1110 1111 1111 1110 1107 1095 1055
951	968	965	1032 1087 1105 1109 1110 1110 1110 1105 1087 1031 964
	1056	1095	1106 1108 1109 1109 1106 1095 1055
952	968	967	1032 1082 1097 1100 1101 1101 1099 1083 1031 964
	1052	1093	1090 1092 1082 1091 1084 1052
951	959	966	1020 1053 1051 1053 1053 1055 1020 964
	1028	1034	1036 1039 1040 1030 1023
951	959	961	963 968 971 974 975 976 973 966
	958	964	968 971 973 974 973 971 952
955	965	969	971 972 972 971 968 937

Table E11B-2.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 11B-2

1	temperature map for bundle 51	ASSEMBLY NO. 2506	MFA-2
	axial height 44,000 in		
	906	804 884 883 882 888 877 875	872
	920	911 912 910 908 905 902 898	896
		* 933 937 938 936 933 929 925	921 919 *
	943 940 *	931 1002 1001 998 995 909 975	* 989 892
		952 1022 1025 1023 1020 1015 1006 975	925 *
	947 945 *	1025 1052 1054 1052 1048 1044 1034 1004	* 910 854
		1000 1054 1064 1062 1058 1054 1046 1033	985 926 *
	950 950 *	1035 1068 1074 1071 1067 1062 1057 1044 1007	* 909 894
	* 949 1015	1064 1076 1075 1071 1067 1062 1055 1035	964 924 *
		1048 1074 1080 1078 1073 1068 1063 1057 1043 1005	* 907 893
	952 953 *	954 1019 1068 1081 1080 1076 1071 1066 1061 1053 1032	981 921 *
		1044 1078 1084 1081 1076 1071 1066 1060 1054 1039 1001	* 901 886
	954 955 *	1023 1072 1085 1084 1079 1073 1068 1063 1057 1049 1029	977 917 *
		1047 1081 1088 1084 1079 1073 1068 1062 1057 1050 1035	906 *
	955 959 *	961 1024 1075 1088 1087 1082 1076 1070 1065 1059 1054 1045	1024 972 914 *
		1043 1082 1090 1087 1082 1076 1070 1064 1059 1053 1046 1030 988	* 898 885
	954 957 *	960 1013 1071 1089 1090 1085 1079 1073 1067 1061 1056 1050 1040 1016	959 911 *
	937 946 *	955	911 *
	928 942 *	955 1011 1071 1089 1090 1084 1078 1072 1066 1061 1055 1050 1040 1016	961 917 *
		1042 1082 1090 1087 1081 1075 1069 1063 1058 1053 1045 1029 989	* 895 873
	929 944 *	958 1023	
		1075 1086 1086 1081 1075 1069 1063 1058 1052 1043 1023 974 921 *	899 876
	929 945 *	968 1024 1072 1084 1082 1077 1071 1066 1060 1054 1046 1026 970 922 *	901 878
		1045 1078 1083 1080 1074 1068 1063 1057 1050 1036 959	
	928 944 *	968 1022 1068 1088 1078 1073 1068 1062 1057 1046 1029 988 923 *	902 880
		1042 1074 1079 1075 1070 1064 1059 1052 1038 1001	
	926 943 *	959 1019 1063 1074 1072 1067 1062 1057 1049 1030 981 923 *	903 882
		1038 1067 1071 1067 1063 1058 1052 1039 1002	
	923 -840 *	957 1013 1053 1061 1058 1054 1049 1043 1027 968 922 *	903 883
		1027 1058 1051 1046 1044 1039 1029 959	
	918 935 *	951 957 1021 1023 1020 1017 1012 1003 971 921 *	902 883
		935 1001 1000 997 994 989 974	
		* 943 941 940 938 936 934 929 921 *	
	917	913 912 911 910 908 905 900	893
	801	885 884 882 881 878 875 871	865

Table E11B-2.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 11B-2

ASSEMBLY NO. 1405	MFA-1
876	885 889 891 892 892 893 893 986
877	918
878	919 921 922 922 922 922 922 931
879	943 948 952 952 952 951 956 951 955 *
880	963 967 969 969 969 969 969 969
881	973 977 979 979 979 979 979 979
882	983 987 989 989 989 989 989 989
883	993 997 999 999 999 999 999 999
884	1003 1007 1009 1009 1009 1009 1009 1009
885	1013 1017 1019 1019 1019 1019 1019 1019
886	1023 1027 1029 1029 1029 1029 1029 1029
887	1033 1037 1039 1039 1039 1039 1039 1039
888	1043 1047 1049 1049 1049 1049 1049 1049
889	1053 1057 1059 1059 1059 1059 1059 1059
890	1063 1067 1069 1069 1069 1069 1069 1069
891	1073 1077 1079 1079 1079 1079 1079 1079
892	1083 1087 1089 1089 1089 1089 1089 1089
893	1093 1097 1099 1099 1099 1099 1099 1099
894	1103 1107 1109 1109 1109 1109 1109 1109
895	1113 1117 1119 1119 1119 1119 1119 1119
896	1123 1127 1129 1129 1129 1129 1129 1129
897	1133 1137 1139 1139 1139 1139 1139 1139
898	1143 1147 1149 1149 1149 1149 1149 1149
899	1153 1157 1159 1159 1159 1159 1159 1159
900	1163 1167 1169 1169 1169 1169 1169 1169
901	1173 1177 1179 1179 1179 1179 1179 1179
902	1183 1187 1189 1189 1189 1189 1189 1189
903	1193 1197 1199 1199 1199 1199 1199 1199
904	1203 1207 1209 1209 1209 1209 1209 1209
905	1213 1217 1219 1219 1219 1219 1219 1219
906	1223 1227 1229 1229 1229 1229 1229 1229
907	1233 1237 1239 1239 1239 1239 1239 1239
908	1243 1247 1249 1249 1249 1249 1249 1249
909	1253 1257 1259 1259 1259 1259 1259 1259
910	1263 1267 1269 1269 1269 1269 1269 1269
911	1273 1277 1279 1279 1279 1279 1279 1279
912	1283 1287 1289 1289 1289 1289 1289 1289
913	1293 1297 1299 1299 1299 1299 1299 1299
914	1303 1307 1309 1309 1309 1309 1309 1309
915	1313 1317 1319 1319 1319 1319 1319 1319
916	1323 1327 1329 1329 1329 1329 1329 1329
917	1333 1337 1339 1339 1339 1339 1339 1339
918	1343 1347 1349 1349 1349 1349 1349 1349
919	1353 1357 1359 1359 1359 1359 1359 1359
920	1363 1367 1369 1369 1369 1369 1369 1369
921	1373 1377 1379 1379 1379 1379 1379 1379
922	1383 1387 1389 1389 1389 1389 1389 1389
923	1393 1397 1399 1399 1399 1399 1399 1399
924	1403 1407 1409 1409 1409 1409 1409 1409
925	1413 1417 1419 1419 1419 1419 1419 1419
926	1423 1427 1429 1429 1429 1429 1429 1429
927	1433 1437 1439 1439 1439 1439 1439 1439
928	1443 1447 1449 1449 1449 1449 1449 1449
929	1453 1457 1459 1459 1459 1459 1459 1459
930	1463 1467 1469 1469 1469 1469 1469 1469
931	1473 1477 1479 1479 1479 1479 1479 1479
932	1483 1487 1489 1489 1489 1489 1489 1489
933	1493 1497 1499 1499 1499 1499 1499 1499
934	1503 1507 1509 1509 1509 1509 1509 1509
935	1513 1517 1519 1519 1519 1519 1519 1519
936	1523 1527 1529 1529 1529 1529 1529 1529
937	1533 1537 1539 1539 1539 1539 1539 1539
938	1543 1547 1549 1549 1549 1549 1549 1549
939	1553 1557 1559 1559 1559 1559 1559 1559
940	1563 1567 1569 1569 1569 1569 1569 1569
941	1573 1577 1579 1579 1579 1579 1579 1579
942	1583 1587 1589 1589 1589 1589 1589 1589
943	1593 1597 1599 1599 1599 1599 1599

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Table E11B-2.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 11B-2

Temperature map for bundle 24 axial height 52-800 in	ASSEMBLY NO. 1405	MFA-1	
981	907 911 913 916 918 919 921	932	
936	942 945 947 949 951 952 955	962	
	970 975 970 901 902 903 905 907 991		
922 946	995 994 999 1000 1000 999 996		
	980 983 990 1007 1010 1010 1009 1005 999 995	970 961	
923 947	997 1016 1026 1036 1031 1027 1020 1010		
	981 1015 1031 1039 1041 1035 1033 1022 1000 999	981 964	
924 949	1005 1032 1040 1056 1058 1056 1049 1036 1019		
	996 1027 1043 1060 1065 1064 1060 1050 1034 1014 1001	984 965	
	1011 1041 1062 1073 1077 1076 1072 1063 1046 1023		
925 951	1000 1034 1059 1074 1000 1001 1079 1073 1061 1040 1016 1002	905 969	
	1014 1046 1070 1082 1088 1095 1087 1082 1070 1050 1025		
926 952	1002 1037 1065 1081 1009 1032 1031 1000 1000 1066 1043 1016 1002	907 971	
	1013 1047 1073 1088 1094 1096 1096 1093 1087 1073 1051 1024		
925 953	1000 1036 1066 1085 1094 1097 1090 1087 1093 1094 1066 1041 1015 1002	907 972	
	1009 1043 1071 1080 1090 1101 1101 1100 1095 1088 1072 1047 1020		
926 953	994 1020 1061 1084 1096 1101 1103 1102 1100 1095 1003 1062 1035 1011 1003	969 974	
948 953	995 1029 1062 1086 1098 1103 1105 1105 1103 1097 1095 1064 1037 1013 1008	905 965	
984 983	1011 1046 1076 1093 1102 1105 1106 1105 1101 1093 1076 1051 1024	990 970	
	1022 1027 1003 1030 1105 1108 1107 1105 1090 1064 1060 1033		
900 967	1043 1074 1093 1103 1107 1107 1106 1105 1093 1075 1040 1022 1012	933 973	
	1029 1063 1087 1100 1106 1107 1105 1100 1097 1065 1030		
991 932	1051 1079 1096 1104 1107 1107 1104 1096 1080 1055 1028 1014	955 974	
	1029 1063 1087 1100 1106 1107 1105 1100 1097 1065 1030		
993 995	1020 1055 1080 1095 1102 1104 1102 1095 1091 1050 1031 1016	906 976	
	1033 1064 1085 1096 1101 1101 1097 1086 1066 1040		
995 999	1002 1023 1054 1075 1087 1092 1093 1080 1077 1057 1031 1017	997 977	
	1034 1060 1077 1095 1097 1086 1070 1062 1039		
996 1001	1006 1023 1047 1062 1078 1073 1072 1065 1050 1030 1010	990 979	
	1030 1040 1059 1084 1065 1061 1032 1035		
997 1002	1007 1018 1032 1041 1045 1047 1045 1038 1027 1019	1001 983	
	1020 1020 1034 1037 1036 1035 1029		
	1007 1009 1013 1016 1020 1022 1024 1023 1021		
	1006 1012 1014 1017 1019 1021 1021 1021	1011	
1004	1014 1016 1010 1019 1019 1019 1019	1001	

Table E11B-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 11B-2

temperature map for bundle 51	ASSEMBLY NO. 2586	MFA-2
axial height	92.488 in	
906	921 921 928 918 916 914 913	906
931	958 * 945 945 943 941 939 936 935	931
955	* 968 968 968 966 963 960 958 955 955 *	
959	* 983 988 988 987 983 977 969 *	
964 970 *	972 965 966 1000 1000 996 991 982 978 959 *	940 920
987 982 *	1000 1015 1021 1022 1018 1011 990 982	
997 982 *	996 1017 1028 1032 1030 1024 1015 998 976 968 *	942 923
990 987 *	1011 1033 1045 1049 1046 1040 1030 1012 987	
993 981 *	983 1004 1047 1054 1054 1050 1042 1028 1006 978 968 *	942 925
995 994 *	1018 1043 1059 1064 1064 1059 1051 1038 1016 988	
996 997 *	999 1018 1030 1050 1067 1060 1055 1049 1032 1007 977 958 *	942 925
999 997 *	1022 1049 1066 1073 1073 1070 1064 1054 1039 1015 985	
999 994 *	1013 1042 1063 1074 1076 1073 1060 1061 1050 1031 1005 974 957 *	941 926
999 997 *	1023 1050 1069 1070 1079 1075 1070 1063 1053 1036 1011 981	
999 997 *	1019 1046 1068 1079 1081 1079 1074 1068 1060 1040 1029 1003 974	
999 993 *	1003 1034 1060 1076 1082 1080 1076 1071 1064 1055 1040 1018 990 954	940 925
999 994 *	1008 1034 1060 1076 1081 1080 1076 1070 1064 1055 1040 1018 990	955 * 932 908
999 994 *	1019 1047 1068 1079 1081 1076 1073 1067 1059 1040 1029 1004 976	956 958 * 934 909
999 995 *	1015 1042 1065 1077 1079 1077 1072 1066 1050 1045 1026 1000 973 961 *	937 911
999 995 *	1025 1052 1070 1077 1078 1074 1069 1061 1051 1035 1011 984	
999 995 *	1081 1018 1044 1064 1073 1075 1072 1066 1059 1040 1030 1005 978 963 *	939 913
999 995 *	1027 1051 1067 1073 1072 1069 1061 1052 1037 1015 900	
999 995 *	1002 1018 1042 1059 1066 1067 1063 1057 1046 1030 1007 980 964 *	940 915
999 995 *	1026 1047 1059 1063 1062 1057 1049 1035 1015 909	
999 995 *	1002 1016 1036 1049 1054 1053 1040 1040 1026 1005 980 964 *	941 917
999 995 *	1021 1037 1046 1048 1045 1039 1029 1011 980	
999 995 *	1001 1012 1024 1032 1033 1031 1025 1015 990 979 965 *	942 918
999 995 *	1013 1021 1025 1025 1021 1014 1002 984	
999 995 *	998 1003 1007 1005 1006 1004 999 989 975 966 *	943 919
999 995 *	999 1001 1000 999 994 980 978	
999 995 *	993 990 988 985 983 981 977 972 968 *	
999 995 *	963 957 954 952 950 947 943 939	934
999 995 *	923 920 918 915 912 909 995	899

Table E11B-2.17. Composition of MFA-1 at EOC 11B-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	9.2580E-06
			U-238	7.0573E-03	6.7668E-03
			Pu-239	0.0000E+00	2.2827E-04
			Pu-240	0.0000E+00	1.3736E-05
			FP	0.0000E+00	5.1535E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	7.4220E-06
			U-238	4.4499E-03	4.2325E-03
			Pu-239	1.7520E-03	1.3614E-03
			Pu-240	2.2340E-04	2.9540E-04
			Pu-241	1.9280E-05	2.5584E-05
			Pu-242	4.7430E-06	5.3330E-06
			Am-241	7.6680E-07	3.1203E-06
			FP	0.0000E+00	5.2835E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	6.7839E-06
			U-238	4.4499E-03	4.1777E-03
			Pu-239	1.7520E-03	1.2751E-03
			Pu-240	2.2340E-04	2.9663E-04
			Pu-241	1.9280E-05	2.5886E-05
			Pu-242	4.7430E-06	5.3521E-06
			Am-241	7.6680E-07	3.0355E-06
			FP	0.0000E+00	6.6834E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	6.4432E-06
			U-238	4.4499E-03	4.1493E-03
			Pu-239	1.7520E-03	1.2335E-03
			Pu-240	2.2340E-04	3.0106E-04
			Pu-241	1.9280E-05	2.6766E-05
			Pu-242	4.7430E-06	5.4386E-06
			Am-241	7.6680E-07	3.0231E-06
			FP	0.0000E+00	7.3343E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	6.5587E-06
			U-238	4.4499E-03	4.1590E-03
			Pu-239	1.7520E-03	1.2469E-03
			Pu-240	2.2340E-04	2.9911E-04
			Pu-241	1.9280E-05	2.6400E-05
			Pu-242	4.7430E-06	5.4020E-06
			Am-241	7.6680E-07	3.0246E-06
			FP	0.0000E+00	7.1231E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	7.1196E-06
			U-238	4.4499E-03	4.2051E-03
			Pu-239	1.7520E-03	1.3143E-03
			Pu-240	2.2340E-04	2.9056E-04
			Pu-241	1.9280E-05	2.4843E-05
			Pu-242	4.7430E-06	5.2564E-06
			Am-241	7.6680E-07	3.0393E-06
			FP	0.0000E+00	6.0899E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	7.9765E-06
			U-238	4.4499E-03	4.2720E-03
			Pu-239	1.7520E-03	1.4237E-03
			Pu-240	2.2340E-04	2.8250E-04
			Pu-241	1.9280E-05	2.3508E-05
			Pu-242	4.7430E-06	5.1583E-06
			Am-241	7.6680E-07	3.1091E-06
			FP	0.0000E+00	4.4145E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.0785E-05
			U-238	7.0573E-03	6.8605E-03
			Pu-239	0.0000E+00	1.6292E-04
			Pu-240	0.0000E+00	5.8761E-06
			FP	0.0000E+00	3.0217E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11B-2.18. Composition of MFA-2 at EOC 11B-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	9.2743E-06
			U-238	7.0573E-03	6.7733E-03
			Pu-239	0.0000E+00	2.2335E-04
			Pu-240	0.0000E+00	1.3590E-05
			FP	0.0000E+00	5.0079E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	6.9980E-06
			U-238	4.4270E-03	4.2135E-03
			Pu-239	1.7483E-03	1.3621E-03
			Pu-240	2.2290E-04	2.9356E-04
			Pu-241	1.9040E-05	2.5262E-05
			Pu-242	4.7330E-06	5.2993E-06
			Am-241	7.5700E-07	3.1159E-06
			FP	0.0000E+00	5.2110E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	6.3765E-06
			U-238	4.4270E-03	4.1570E-03
			Pu-239	1.7483E-03	1.2733E-03
			Pu-240	2.2290E-04	2.9522E-04
			Pu-241	1.9040E-05	2.5640E-05
			Pu-242	4.7330E-06	5.3213E-06
			Am-241	7.5700E-07	3.0314E-06
			FP	0.0000E+00	6.6538E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	6.0417E-06
			U-238	4.4270E-03	4.1270E-03
			Pu-239	1.7483E-03	1.2296E-03
			Pu-240	2.2290E-04	2.9996E-04
			Pu-241	1.9040E-05	2.6583E-05
			Pu-242	4.7330E-06	5.4125E-06
			Am-241	7.5700E-07	3.0233E-06
			FP	0.0000E+00	7.3333E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	6.1390E-06
			U-238	4.4270E-03	4.1356E-03
			Pu-239	1.7483E-03	1.2417E-03
			Pu-240	2.2290E-04	2.9819E-04
			Pu-241	1.9040E-05	2.6250E-05
			Pu-242	4.7330E-06	5.3794E-06
			Am-241	7.5700E-07	3.0244E-06
			FP	0.0000E+00	7.1448E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	6.6538E-06
			U-238	4.4270E-03	4.1808E-03
			Pu-239	1.7483E-03	1.3075E-03
			Pu-240	2.2290E-04	2.8990E-04
			Pu-241	1.9040E-05	2.4719E-05
			Pu-242	4.7330E-06	5.2385E-06
			Am-241	7.5700E-07	3.0354E-06
			FP	0.0000E+00	6.1331E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	7.4406E-06
			U-238	4.4270E-03	4.2472E-03
			Pu-239	1.7483E-03	1.4151E-03
			Pu-240	2.2290E-04	2.8269E-04
			Pu-241	1.9040E-05	2.3505E-05
			Pu-242	4.7330E-06	5.1530E-06
			Am-241	7.5700E-07	3.1037E-06
			FP	0.0000E+00	4.4731E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.0571E-05
			U-238	7.0573E-03	6.8525E-03
			Pu-239	0.0000E+00	1.6861E-04
			Pu-240	0.0000E+00	6.7456E-06
			FP	0.0000E+00	3.1990E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.13 Cycle 11C

Table B11C.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 11C

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1405	9.643E-02	3.625E+00	5.495E-02	3.776E+00
1304	0.000E+00	6.886E+00	0.000E+00	6.886E+00
1406	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1404	0.000E+00	5.997E+00	0.000E+00	5.997E+00
1508	0.000E+00	5.002E+00	0.000E+00	5.002E+00
1506	1.285E-02	3.601E+00	8.443E-03	3.622E+00
1507	1.041E-02	3.512E+00	7.524E-03	3.529E+00
2506	8.629E-02	3.350E+00	5.176E-02	3.488E+00
2404	0.000E+00	6.171E+00	0.000E+00	6.171E+00
2505	7.102E-03	4.430E+00	5.018E-03	4.442E+00
2405	1.641E-02	3.569E+00	1.093E-02	3.596E+00
2606	1.432E-02	3.375E+00	8.043E-03	3.398E+00
2607	5.557E-03	3.832E+00	4.598E-03	3.842E+00
2507	1.173E-02	3.601E+00	8.216E-03	3.621E+00

Table B11C.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 11C

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.376E+15	2.233E+15
MFA-2	2506	3.103E+15	2.005E+15

Table B11C.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 11C

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8268E-02	1.4252E-02	0.0000E+00
-92.78	6.0758E-02	2.7607E-02	0.0000E+00
-87.78	9.7507E-02	4.4307E-02	0.0000E+00
-82.78	1.4141E-01	6.6325E-02	0.0000E+00
-77.78	1.9558E-01	9.6145E-02	0.0000E+00
-72.15	2.5778E-01	1.3507E-01	0.0000E+00
-65.90	3.2110E-01	1.8521E-01	0.0000E+00
-60.35	3.8730E-01	2.5394E-01	1.2496E-01
-55.49	4.7094E-01	3.4124E-01	1.4140E-01
-50.62	5.6506E-01	4.5232E-01	1.6198E-01
-47.17	6.3758E-01	5.5391E-01	1.8137E-01
-43.58	7.1271E-01	6.6746E-01	7.8746E-01
-38.45	8.2412E-01	8.0671E-01	8.7193E-01
-33.32	9.2848E-01	9.2525E-01	9.6975E-01
-28.20	1.0197E+00	1.0228E+00	1.0021E+00
-23.07	1.0962E+00	1.1027E+00	1.0751E+00
-17.94	1.1561E+00	1.1640E+00	1.1326E+00
-12.82	1.1981E+00	1.2060E+00	1.1417E+00
-7.69	1.2225E+00	1.2306E+00	1.1646E+00
-2.56	1.2290E+00	1.2374E+00	1.1706E+00
2.56	1.2177E+00	1.2266E+00	1.1698E+00
7.69	1.1884E+00	1.1980E+00	1.1418E+00
12.82	1.1420E+00	1.1523E+00	1.0976E+00
17.94	1.0798E+00	1.0910E+00	1.0835E+00
23.07	1.0017E+00	1.0122E+00	1.0060E+00
28.20	9.0963E-01	9.1764E-01	9.1493E-01
33.32	8.0612E-01	8.0923E-01	8.7003E-01
38.45	6.9260E-01	6.8436E-01	7.5430E-01
43.58	5.7522E-01	5.4573E-01	6.4611E-01
47.17	4.9989E-01	4.4378E-01	1.1625E-01
50.62	4.3307E-01	3.5864E-01	9.7242E-02
55.49	3.5171E-01	2.6871E-01	7.8223E-02
60.35	2.7839E-01	1.9662E-01	6.3172E-02
64.98	2.2728E-01	1.4936E-01	0.0000E+00
69.39	1.9332E-01	1.2140E-01	0.0000E+00
76.46	1.4431E-01	8.3768E-02	0.0000E+00
86.80	9.2547E-02	4.9108E-02	0.0000E+00
98.14	5.2789E-02	2.6260E-02	0.0000E+00
110.00	2.2354E-02	1.1518E-02	0.0000E+00

Table B11C.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 11C

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7199E-02	1.3951E-02	0.0000E+00
-92.78	5.8357E-02	2.6933E-02	0.0000E+00
-87.78	9.3541E-02	4.3102E-02	0.0000E+00
-82.78	1.3554E-01	6.4326E-02	0.0000E+00
-77.78	1.8743E-01	9.2971E-02	0.0000E+00
-72.15	2.4742E-01	1.3038E-01	0.0000E+00
-65.90	3.0861E-01	1.7871E-01	0.0000E+00
-60.35	3.7232E-01	2.4544E-01	1.2047E-01
-55.49	4.5535E-01	3.3152E-01	1.3669E-01
-50.62	5.5041E-01	4.4228E-01	1.5708E-01
-47.17	6.2552E-01	5.4528E-01	1.7696E-01
-43.58	7.0421E-01	6.6107E-01	7.7838E-01
-38.45	8.1968E-01	8.0322E-01	8.6818E-01
-33.32	9.2704E-01	9.2412E-01	9.7042E-01
-28.20	1.0204E+00	1.0236E+00	1.0043E+00
-23.07	1.0986E+00	1.1049E+00	1.0794E+00
-17.94	1.1595E+00	1.1673E+00	1.1383E+00
-12.82	1.2022E+00	1.2100E+00	1.1465E+00
-7.69	1.2269E+00	1.2349E+00	1.1697E+00
-2.56	1.2332E+00	1.2415E+00	1.1756E+00
2.56	1.2212E+00	1.2299E+00	1.1731E+00
7.69	1.1907E+00	1.1999E+00	1.1438E+00
12.82	1.1427E+00	1.1525E+00	1.0980E+00
17.94	1.0787E+00	1.0893E+00	1.0811E+00
23.07	9.9929E-01	1.0091E+00	1.0021E+00
28.20	9.0659E-01	9.1401E-01	9.1028E-01
33.32	8.0326E-01	8.0602E-01	8.6470E-01
38.45	6.9080E-01	6.8267E-01	7.5043E-01
43.58	5.7485E-01	5.4592E-01	6.4583E-01
47.17	4.9892E-01	4.4257E-01	1.1928E-01
50.62	4.2850E-01	3.5301E-01	9.9660E-02
55.49	3.4099E-01	2.5796E-01	7.9660E-02
60.35	2.6310E-01	1.8326E-01	6.3599E-02
64.98	2.1241E-01	1.3728E-01	0.0000E+00
69.39	1.8127E-01	1.1222E-01	0.0000E+00
76.46	1.3665E-01	7.8678E-02	0.0000E+00
86.80	8.8113E-02	4.6701E-02	0.0000E+00
98.14	5.0253E-02	2.5129E-02	0.0000E+00
110.00	2.1396E-02	1.1112E-02	0.0000E+00

Table B11C.6. Fission Power Distribution by Pin in MFA-2 at BOC 11C

CORE POSITION 2506

	1.047	1.037	1.026	1.015	1.003	0.990	0.977	0.962						
	1.053	1.043	1.032	1.021	1.009	0.997	0.983	0.969	0.955					
	1.058	1.048	1.038	1.027	1.015	1.003	0.990	0.976	0.962	0.947				
	1.064	1.054	1.044	1.033	1.021	1.009	0.996	0.982	0.968	0.954	0.939			
	1.070	1.060	1.049	1.038	1.027	1.014	1.002	0.988	0.974	0.960	0.945	0.930		
	1.075	1.065	1.055	1.044	1.032	1.020	1.007	0.994	0.980	0.966	0.951	0.936	0.921	
	1.081	1.070	1.060	1.049	1.037	1.025	1.013	1.000	0.986	0.972	0.957	0.943	0.927	0.912
1.086	1.076	1.065	1.054	1.042	1.030	1.018	1.005	0.991	0.977	0.963	0.948	0.934	0.918	0.903
	1.081	1.070	1.059	1.047	1.035	1.023	1.010	0.996	0.983	0.969	0.954	0.939	0.924	0.909
	1.074	1.063	1.051	1.039	1.027	1.014	1.001	0.988	0.974	0.959	0.945	0.930	0.915	
	1.067	1.056	1.044	1.031	1.019	1.006	0.992	0.978	0.964	0.950	0.935	0.921		
	1.060	1.047	1.035	1.023	1.010	0.996	0.983	0.969	0.955	0.940	0.926			
	1.051	1.039	1.026	1.013	1.000	0.987	0.973	0.959	0.945	0.931				
	1.042	1.029	1.017	1.004	0.990	0.977	0.963	0.949	0.935					
	1.032	1.019	1.007	0.994	0.980	0.967	0.953	0.939						

Table B11C.7. Fast Flux Distribution by Pin in MFA-1 at BOC 11C

CORE POSITION 1404

	0.928	0.930	0.932	0.933	0.934	0.935	0.936	0.936	
	0.938	0.940	0.942	0.943	0.944	0.945	0.945	0.945	0.945
	0.949	0.951	0.952	0.953	0.954	0.954	0.954	0.954	0.953
	0.959	0.961	0.962	0.963	0.964	0.964	0.963	0.963	0.961
	0.960								
	0.970	0.972	0.973	0.974	0.974	0.974	0.973	0.972	0.970
	0.968	0.966							
	0.980	0.982	0.984	0.984	0.985	0.984	0.984	0.982	0.981
	0.979	0.976	0.974	0.971					
	0.991	0.993	0.995	0.995	0.996	0.995	0.994	0.993	0.991
	0.988	0.985	0.982	0.978	0.974				
1.003	1.005	1.006	1.007	1.007	1.006	1.005	1.003	1.001	0.998
0.994	0.990	0.986	0.981	0.976					
	1.016	1.018	1.018	1.019	1.018	1.016	1.014	1.012	1.008
	1.004	1.000	0.995	0.989	0.984				
	1.029	1.030	1.030	1.030	1.028	1.026	1.023	1.019	1.015
	1.010	1.004	0.998	0.992					
	1.042	1.043	1.042	1.041	1.038	1.035	1.031	1.026	1.021
	1.014	1.008	1.000						
	1.055	1.054	1.053	1.051	1.047	1.043	1.038	1.032	1.025
	1.018	1.010							
	1.067	1.066	1.063	1.060	1.056	1.050	1.044	1.037	1.029
	1.021								
	1.078	1.076	1.073	1.069	1.063	1.057	1.050	1.041	1.032
	1.089	1.086	1.082	1.077	1.070	1.063	1.054	1.045	

Table B11C.8. Fast Flux Distribution by Pin in MFA-2 at BOC 11C

CORE POSITION 2506

	1.076	1.059	1.042	1.025	1.007	0.989	0.972	0.953						
	1.084	1.067	1.050	1.033	1.016	0.998	0.980	0.962	0.944					
	1.090	1.073	1.057	1.040	1.023	1.006	0.988	0.971	0.953	0.935				
	1.095	1.079	1.063	1.047	1.030	1.013	0.996	0.979	0.961	0.944	0.926			
	1.100	1.084	1.068	1.052	1.036	1.019	1.003	0.986	0.969	0.952	0.934	0.916		
	1.103	1.088	1.073	1.057	1.041	1.025	1.009	0.993	0.976	0.959	0.942	0.924	0.906	
	1.105	1.091	1.076	1.061	1.046	1.030	1.015	0.998	0.982	0.966	0.949	0.932	0.914	0.896
1.107	1.093	1.079	1.065	1.050	1.035	1.019	1.004	0.988	0.972	0.955	0.939	0.921	0.904	0.886
	1.095	1.081	1.067	1.053	1.038	1.024	1.008	0.993	0.977	0.961	0.945	0.928	0.911	0.893
	1.082	1.069	1.056	1.042	1.027	1.013	0.998	0.982	0.967	0.951	0.934	0.918	0.900	
	1.070	1.057	1.044	1.030	1.016	1.001	0.987	0.972	0.956	0.940	0.924	0.907		
	1.058	1.046	1.032	1.019	1.005	0.990	0.976	0.961	0.945	0.929	0.913			
	1.047	1.034	1.021	1.007	0.994	0.979	0.965	0.950	0.934	0.918				
	1.035	1.023	1.010	0.996	0.982	0.968	0.953	0.938	0.922					
	1.024	1.011	0.998	0.985	0.971	0.957	0.942	0.926						

Table B11C.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 11C

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.3414E+15	2.1482E+15
SE	2.1158E+15	2.2345E+15
SW	2.0395E+15	2.0307E+15
W	2.1254E+15	1.8026E+15
NW	2.2186E+15	1.7797E+15
NE	2.4182E+15	1.9447E+15

Table B11C.10. Assembly Outlet Temperatures and
Flow Rates at BOC 11C

CORE POS.	CALCULATED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1405	1045	111070
1304	1056	194070
1404	1002	197790
1406	858	14150
1506	881	201110
1507	874	201110
1508	970	181030
2506	1019	111070
2404	1011	197790
2405	881	191240
2505	915	201110
2507	878	201110
2606	905	164920
2607	943	158170

Assembly flows are based on a calculated core pressure drop of 103.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

temperature map for bundle 24 ASSEMBLY NO. 1495 MFA-1

Temperature map for bundle 24	ASSEMBLY NO. 1405	MFA-1
44.088 in	867	879 883 884 885 885 885 884 887
867	890	907 910 911 911 911 910 909 917
		935 936 930 937 936 935 934 936 *
		982 906 *
		985 1000 1002 1001 1000 997 985 *
		985 1010 1024 1025 1024 1022 1016 999 944 *
		935 927
		1018 1048 1054 1055 1054 1053 1046 1019 *
		985 909 *
		933 959 1040 1062 1065 1065 1064 1060 1047 1084 948 *
		940 931
		1027 1064 1074 1075 1075 1075 1072 1062 1029 *
		887 912 *
		937 1005 1075 1079 1080 1079 1078 1073 1056 1090 950 *
		943 935
		1031 1078 1081 1084 1084 1083 1079 1088 1032 *
		889 915 *
		940 1009 1062 1080 1085 1086 1086 1085 1083 1079 1060 1011 951 *
		944 937
		1034 1073 1085 1089 1090 1089 1089 1087 1083 1071 1034 *
		890 917 *
		943 1011 1065 1084 1093 1090 1090 1090 1089 1087 1082 1083 1013 951 *
		945 940
		1036 1076 1089 1082 1083 1032 1038 1086 1074 1035 *
		890 918 *
		945 1011 1067 1092 1094 1094 1094 1093 1092 1090 1085 1065 1012 950 *
		945 941
		1032 1076 1091 1095 1095 1096 1096 1095 1093 1089 1074 1031 *
		889 917 *
		944 1080 1063 1087 1095 1097 1097 1097 1096 1093 1086 1061 1081 948 *
		944 941
		939 941 *
		1008 1064 1089 1097 1099 1100 1100 1089 1089 1095 1088 1064 1084 954 *
		929 984
		1034 1088 1095 1093 1100 1101 1101 1100 1100 1098 1094 1075 1036 *
		943 946 *
		949 1016 1074 1085 1101 1102 1103 1103 1102 1104 1084 1074 1020 959 *
		932 985
		1044 1086 1099 1103 1104 1104 1103 1102 1099 1086 1046 *
		947 950 *
		954 1023 1079 1089 1104 1105 1106 1105 1104 1080 1079 1025 961 *
		933 905
		1049 1090 1102 1106 1107 1107 1107 1106 1102 1090 1050 *
		949 954 *
		959 1027 1062 1107 1100 1100 1107 1102 1083 1020 962 *
		934 985
		1053 1093 1105 1108 1109 1109 1105 1093 1053 *
		954 956 *
		962 1030 1084 1103 1107 1108 1107 1103 1085 1030 962 *
		934 986
		1055 1093 1104 1106 1107 1106 1104 1093 1055 *
		951 958 *
		965 1030 1080 1085 1089 1089 1089 1086 1081 1030 962 *
		935 986
		1050 1081 1088 1090 1091 1090 1082 1051 *
		950 957 *
		964 1019 1051 1053 1061 1062 1061 1054 1019 952 *
		936 988
		1019 1033 1037 1038 1039 1037 1022 *
		980 962 966 970 972 974 974 971 965 *
		957
		963 967 970 972 973 973 970 *
		951
		955 965 968 971 972 972 971 969 937

Table B11C.12. MFA-2 Sodium Subchannel Temperatures at Top of Core Elevation for BOC 11C

N.

I temperature map for bundle 51		ASSEMBLY NO. 2566		MFA-2	
axial height		917		882	
925	928	919	916	913	906
933	937	930	936	933	929
942	948	937	951	953	968
946	944	943	1007	1051	1061
949	940	940	1033	1055	1070
951	951	952	1017	1065	1070
952	954	956	1020	1069	1081
953	955	950	1044	1078	1084
954	955	957	1069	1067	1085
955	956	958	1087	1065	1095
956	957	959	1083	1070	1073
957	958	959	1083	1070	1073
958	959	960	1083	1070	1073
959	960	961	1083	1070	1073
960	961	962	1083	1070	1073
961	962	963	1083	1070	1073
962	963	964	1083	1070	1073
963	964	965	1083	1070	1073
964	965	966	1083	1070	1073
965	966	967	1083	1070	1073
966	967	968	1083	1070	1073
967	968	969	1083	1070	1073
968	969	970	1083	1070	1073
969	970	971	1083	1070	1073
970	971	972	1083	1070	1073
971	972	973	1083	1070	1073
972	973	974	1083	1070	1073
973	974	975	1083	1070	1073
974	975	976	1083	1070	1073
975	976	977	1083	1070	1073
976	977	978	1083	1070	1073
977	978	979	1083	1070	1073
978	979	980	1083	1070	1073
979	980	981	1083	1070	1073
980	981	982	1083	1070	1073
981	982	983	1083	1070	1073
982	983	984	1083	1070	1073
983	984	985	1083	1070	1073
984	985	986	1083	1070	1073
985	986	987	1083	1070	1073
986	987	988	1083	1070	1073
987	988	989	1083	1070	1073
988	989	990	1083	1070	1073
989	990	991	1083	1070	1073
990	991	992	1083	1070	1073
991	992	993	1083	1070	1073
992	993	994	1083	1070	1073
993	994	995	1083	1070	1073
994	995	996	1083	1070	1073
995	996	997	1083	1070	1073
996	997	998	1083	1070	1073
997	998	999	1083	1070	1073
998	999	1000	1083	1070	1073

Table B11C.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 11C

1 temperature map for bundle 24		ASSEMBLY NO. 1485		MFA-1							
axial height 50.500 in											
	879		891	894	896	897	897	897	897	910	
		912		921	924	925	925	925	925	933	
			944	950	953	954	953	952	951	951 955 *	
				984	998	1001	1001	1000	996	986	
	895 920 *	944	983	1013	1021	1022	1022	1019	1012	989 962 * 951 939	
				1013	1044	1053	1055	1054	1052	1043 1016	
	897 922 *	947	997	1045	1062	1065	1066	1064	1060	1045 1005 967 * 955 944	
				1023	1063	1077	1079	1080	1078	1075 1062 1026 *	
	899 925 *	951	1003	1056	1077	1083	1084	1084	1082	1076 1056 1010 969 * 950 947	
				1028	1070	1086	1090	1090	1088	1084 1069 1030 *	
	901 928 *	955	1007	1061	1084	1091	1092	1092	1091	1089 1082 1060 1012 969 * 960 950	
				1031	1074	1090	1095	1096	1095	1093 1088 1073 1032 *	
	902 930 *	950	1010	1064	1080	1095	1097	1097	1096	1093 1086 1063 1013 969 * 960 952	
				1032	1077	1093	1098	1100	1100	1099 1099 1097 1091 1075 1033 *	
	902 931 *	960	1009	1065	1090	1098	1100	1101	1101	1100 1099 1097 1080 1064 1011 967 * 960 953	
				1026	1075	1095	1101	1103	1103	1103 1102 1100 1093 1074 1027 *	
	901 930 *	959	997	1059	1090	1101	1104	1104	1105	1104 1104 1102 1099 1080 1059 1000 966 * 960 953	
	919 937 *	955								967 * 950 934	
	954 956 *	950	997	1061	1092	1103	1106	1107	1107	1107 1106 1105 1102 1091 1061 1003 972 * 940 925	
				1029	1079	1099	1106	1107	1100	1100 1100 1107 1105 1090 1079 1032 *	
				950 961 *	964	1014	1073	1099	1107	1109 1110 1110 1110 1109 1106 1090 1073 1019 977 * 951 925	
						1040	1006	1104	1109	1111 1111 1111 1110 1109 1104 1006 1043 *	
				961 966 *	970	1021	1078	1102	1110	1112 1113 1113 1112 1110 1102 1079 1025 979 * 952 925	
						1046	1091	1107	1112	1114 1114 1114 1112 1107 1091 1047 *	
				964 970 *	975	1026	1081	1105	1113	1115 1115 1115 1113 1105 1082 1028 900 * 953 925	
						1049	1093	1109	1114	1115 1115 1114 1110 1094 1050 *	
				966 973 *	979	1029	1083	1105	1112	1113 1113 1112 1106 1083 1029 901 * 953 926	
						1051	1092	1106	1110	1111 1110 1107 1093 1051 *	
				966 974 *	982	1029	1077	1094	1099	1100 1099 1095 1077 1028 901 * 954 926	
						1045	1078	1087	1090	1090 1088 1079 1046 *	
				966 974 *	981	1017	1046	1056	1050	1059 1050 1050 1018 901 * 956 929	
						1017	1031	1036	1030	1039 1036 1021 *	
						978	979	983	987	991 993 993 990 985 *	
				975		900	904	907	909	990 990 990 971	
				972		902	905	907	908	908 907 905 957	

temperature map for bundle	51
axial height	50.500 in

[illegible]

Table B11C.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 11C

1. temperature map for bundle 24 axial height 92.086 in 984	ASSEMBLY NO. 1485	MFA-1
933	912 916 918 921 922 924 926	936
	945 948 951 953 954 955 957	964
	973 977 980 982 984 985 986 989 992	
922 947	987 995 1000 1002 1002 1008 997	
	905 1000 1000 1011 1012 1010 1006 1000 996	980 963
923 940	998 1017 1028 1032 1032 1029 1021 1011	
	992 1017 1032 1040 1042 1040 1034 1024 1009 989	963 966
924 950	1006 1033 1049 1057 1059 1057 1059 1037 1019	
	937 1020 1050 1061 1066 1066 1061 1052 1035 1014 1001	995 960
	1011 1042 1063 1073 1077 1077 1073 1064 1047 1024	
925 951	1001 1034 1060 1074 1081 1002 1008 1074 1062 1041 1017 1002	966 970
	1014 1047 1070 1083 1088 1090 1088 1082 1071 1051 1025	
926 953	1002 1037 1065 1081 1009 1092 1082 1099 1091 1066 1043 1017 1002	907 972
	1013 1047 1073 1088 1094 1097 1095 1094 1087 1074 1051 1024	
925 953	980 1001 1036 1065 1094 1090 1089 1097 1093 1084 1067 1041 1015 1002	960 974
	1000 1042 1071 1089 1098 1101 1102 1101 1097 1089 1072 1047 1020	
925 952	994 1027 1060 1063 1096 1101 1103 1103 1101 1095 1083 1063 1035 1011 1003	969 975
925 952	994 1027 1060 1063 1096 1101 1103 1103 1101 1095 1083 1063 1035 1011 1003	969 975
994 963	995 1029 1062 1085 1098 1103 1105 1105 1103 1097 1086 1085 1037 1013 1008	969 971
	1011 1046 1075 1083 1102 1105 1106 1105 1102 1093 1076 1051 1024	
987 987	987 1007 1043 1073 1083 1103 1107 1100 1106 1102 1093 1075 1049 1022 1012	993 973
	1022 1057 1083 1090 1105 1108 1105 1090 1084 1061 1033	
990 991	1023 1063 1087 1100 1106 1107 1106 1100 1087 1066 1030	
	1023 1063 1087 1100 1106 1107 1106 1100 1087 1066 1030	
993 995	997 1020 1054 1080 1095 1102 1104 1102 1096 1081 1058 1031 1016	996 976
	1033 1054 1085 1095 1101 1101 1097 1086 1065 1040	
995 999	1002 1023 1054 1075 1088 1093 1093 1077 1057 1032 1017	997 977
	1034 1060 1077 1085 1080 1066 1070 1063 1040	
996 1001	1047 1062 1070 1073 1072 1065 1051 1031 1010	999 979
	1029 1040 1059 1064 1065 1062 1052 1036	
997 1002	1007 1018 1032 1041 1045 1039 1027 1019	1001 983
	1019 1020 1034 1037 1030 1036 1029	
	1007 1009 1013 1016 1020 1023 1024 1023 1021	
1006	1012 1015 1018 1020 1022 1022 1022	1012
1005	1015 1017 1019 1020 1021 1021 1020	1002

Table E11C.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 11C

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1405	1.016E-01	3.569E+00	6.232E-02	3.733E+00
1304	0.000E+00	6.699E+00	0.000E+00	6.699E+00
1406	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1404	0.000E+00	5.895E+00	0.000E+00	5.895E+00
1508	0.000E+00	4.950E+00	0.000E+00	4.950E+00
1506	1.334E-02	3.578E+00	9.476E-03	3.600E+00
1507	1.091E-02	3.478E+00	8.437E-03	3.497E+00
2506	9.041E-02	3.301E+00	5.853E-02	3.450E+00
2404	0.000E+00	6.027E+00	0.000E+00	6.027E+00
2505	8.136E-03	4.421E+00	5.964E-03	4.435E+00
2405	1.705E-02	3.517E+00	1.223E-02	3.546E+00
2606	1.458E-02	3.374E+00	9.055E-03	3.398E+00
2607	6.212E-03	3.780E+00	5.389E-03	3.792E+00
2507	1.218E-02	3.544E+00	9.180E-03	3.566E+00

Table E11C.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 11C

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.421E+15	2.249E+15
MFA-2	2506	3.141E+15	2.017E+15

Table E11C.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 11C

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7431E-02	1.3900E-02	0.0000E+00
-92.78	5.8969E-02	2.6927E-02	0.0000E+00
-87.78	9.4648E-02	4.3220E-02	0.0000E+00
-82.78	1.3729E-01	6.4701E-02	0.0000E+00
-77.78	1.8992E-01	9.3803E-02	0.0000E+00
-72.15	2.5037E-01	1.3180E-01	0.0000E+00
-65.90	3.1191E-01	1.8081E-01	0.0000E+00
-60.35	3.7620E-01	2.4819E-01	1.3481E-01
-55.49	4.5756E-01	3.3328E-01	1.5185E-01
-50.62	5.4914E-01	4.4121E-01	1.7281E-01
-47.17	6.1973E-01	5.3974E-01	1.9206E-01
-43.58	6.9285E-01	6.4982E-01	7.6828E-01
-38.45	8.0176E-01	7.8556E-01	8.5165E-01
-33.32	9.0435E-01	9.0166E-01	9.4829E-01
-28.20	9.9474E-01	9.9790E-01	9.7563E-01
-23.07	1.0718E+00	1.0779E+00	1.0490E+00
-17.94	1.1335E+00	1.1408E+00	1.1081E+00
-12.82	1.1788E+00	1.1859E+00	1.1179E+00
-7.69	1.2081E+00	1.2152E+00	1.1451E+00
-2.56	1.2207E+00	1.2281E+00	1.1570E+00
2.56	1.2165E+00	1.2247E+00	1.1639E+00
7.69	1.1950E+00	1.2040E+00	1.1435E+00
12.82	1.1563E+00	1.1663E+00	1.1070E+00
17.94	1.1010E+00	1.1123E+00	1.1052E+00
23.07	1.0280E+00	1.0389E+00	1.0329E+00
28.20	9.3889E-01	9.4747E-01	9.4488E-01
33.32	8.3604E-01	8.3989E-01	9.0962E-01
38.45	7.2101E-01	7.1316E-01	7.9166E-01
43.58	6.0061E-01	5.7049E-01	6.8027E-01
47.17	5.2289E-01	4.6484E-01	1.3186E-01
50.62	4.5375E-01	3.7651E-01	1.1144E-01
55.49	3.6910E-01	2.8272E-01	9.0575E-02
60.35	2.9253E-01	2.0721E-01	7.3750E-02
64.98	2.3912E-01	1.5748E-01	0.0000E+00
69.39	2.0354E-01	1.2806E-01	0.0000E+00
76.46	1.5208E-01	8.8444E-02	0.0000E+00
86.80	9.7586E-02	5.1887E-02	0.0000E+00
98.14	5.5653E-02	2.7753E-02	0.0000E+00
110.00	2.3537E-02	1.2164E-02	0.0000E+00

Table E11C.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 11C

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6358E-02	1.3579E-02	0.0000E+00
-92.78	5.6564E-02	2.6218E-02	0.0000E+00
-87.78	9.0678E-02	4.1959E-02	0.0000E+00
-82.78	1.3142E-01	6.2627E-02	0.0000E+00
-77.78	1.8177E-01	9.0523E-02	0.0000E+00
-72.15	2.3999E-01	1.2698E-01	0.0000E+00
-65.90	2.9935E-01	1.7413E-01	0.0000E+00
-60.35	3.6110E-01	2.3944E-01	1.2907E-01
-55.49	4.4170E-01	3.2321E-01	1.4578E-01
-50.62	5.3397E-01	4.3069E-01	1.6639E-01
-47.17	6.0687E-01	5.3042E-01	1.8604E-01
-43.58	6.8331E-01	6.4246E-01	7.5773E-01
-38.45	7.9588E-01	7.8065E-01	8.4607E-01
-33.32	9.0111E-01	8.9875E-01	9.4680E-01
-28.20	9.9340E-01	9.9655E-01	9.7575E-01
-23.07	1.0719E+00	1.0779E+00	1.0510E+00
-17.94	1.1346E+00	1.1418E+00	1.1116E+00
-12.82	1.1807E+00	1.1876E+00	1.1207E+00
-7.69	1.2104E+00	1.2173E+00	1.1485E+00
-2.56	1.2232E+00	1.2305E+00	1.1606E+00
2.56	1.2191E+00	1.2270E+00	1.1666E+00
7.69	1.1974E+00	1.2060E+00	1.1460E+00
12.82	1.1584E+00	1.1679E+00	1.1090E+00
17.94	1.1026E+00	1.1132E+00	1.1055E+00
23.07	1.0290E+00	1.0392E+00	1.0325E+00
28.20	9.3936E-01	9.4733E-01	9.4374E-01
33.32	8.3626E-01	8.3977E-01	9.0692E-01
38.45	7.2160E-01	7.1388E-01	7.8973E-01
43.58	6.0192E-01	5.7237E-01	6.8131E-01
47.17	5.2306E-01	4.6481E-01	1.3488E-01
50.62	4.4982E-01	3.7143E-01	1.1380E-01
55.49	3.5840E-01	2.7193E-01	9.1861E-02
60.35	2.7686E-01	1.9345E-01	7.3897E-02
64.98	2.2379E-01	1.4494E-01	0.0000E+00
69.39	1.9109E-01	1.1851E-01	0.0000E+00
76.46	1.4416E-01	8.3133E-02	0.0000E+00
86.80	9.2981E-02	4.9364E-02	0.0000E+00
98.14	5.3002E-02	2.6558E-02	0.0000E+00
110.00	2.2515E-02	1.1724E-02	0.0000E+00

Table E11C.5. Fission Power Distribution by Pin in MFA-1 at EOC 11C

CORE POSITION 1405

0.939	0.941	0.941	0.941	0.940	0.938	0.935	0.932								
0.949	0.950	0.951	0.952	0.951	0.949	0.947	0.944	0.941							
0.958	0.960	0.961	0.961	0.961	0.960	0.959	0.956	0.953	0.949						
0.966	0.968	0.970	0.971	0.971	0.971	0.969	0.968	0.965	0.962	0.958					
0.973	0.976	0.978	0.979	0.980	0.980	0.980	0.978	0.976	0.974	0.971	0.967				
0.980	0.983	0.985	0.987	0.989	0.989	0.989	0.988	0.987	0.985	0.983	0.980	0.977			
0.986	0.989	0.992	0.994	0.996	0.997	0.998	0.998	0.997	0.996	0.994	0.992	0.989	0.987		
0.991	0.995	0.998	1.001	1.003	1.004	1.005	1.006	1.006	1.005	1.004	1.003	1.001	0.999	0.997	
1.000	1.003	1.006	1.009	1.011	1.012	1.013	1.014	1.014	1.014	1.013	1.012	1.011	1.009		
1.008	1.011	1.014	1.016	1.018	1.020	1.021	1.022	1.022	1.022	1.022	1.022	1.022	1.021		
1.015	1.019	1.021	1.024	1.026	1.027	1.029	1.030	1.031	1.031	1.031	1.031	1.031			
1.023	1.026	1.028	1.031	1.033	1.035	1.036	1.038	1.039	1.040	1.040					
1.030	1.033	1.035	1.038	1.040	1.042	1.044	1.046	1.047	1.049						
1.036	1.039	1.042	1.044	1.047	1.049	1.051	1.053	1.055							
1.043	1.046	1.048	1.051	1.054	1.056	1.059	1.061								

Table E11C.6. Fission Power Distribution by Pin in MFA-2 at EOC 11C

CORE POSITION 2506

	1.049	1.040	1.030	1.019	1.007	0.994	0.981	0.967						
	1.054	1.045	1.035	1.024	1.012	1.000	0.987	0.973	0.959					
	1.059	1.050	1.039	1.029	1.017	1.005	0.993	0.979	0.965	0.951				
	1.064	1.054	1.044	1.034	1.022	1.011	0.998	0.985	0.971	0.956	0.942			
	1.069	1.059	1.049	1.039	1.027	1.016	1.003	0.990	0.976	0.962	0.948	0.933		
	1.074	1.064	1.054	1.043	1.032	1.020	1.008	0.995	0.982	0.968	0.953	0.938	0.923	
	1.079	1.069	1.059	1.048	1.037	1.025	1.013	1.000	0.987	0.973	0.958	0.944	0.929	0.914
1.084	1.074	1.063	1.052	1.041	1.029	1.017	1.005	0.991	0.978	0.964	0.949	0.934	0.920	0.905
	1.078	1.068	1.057	1.045	1.034	1.022	1.009	0.996	0.982	0.968	0.954	0.940	0.925	0.910
	1.072	1.061	1.050	1.038	1.026	1.013	1.000	0.987	0.973	0.959	0.945	0.930	0.915	
	1.065	1.053	1.042	1.029	1.017	1.004	0.991	0.977	0.963	0.949	0.935	0.920		
	1.057	1.045	1.033	1.021	1.008	0.995	0.981	0.968	0.954	0.940	0.925			
	1.048	1.036	1.024	1.011	0.998	0.985	0.971	0.958	0.944	0.930				
	1.039	1.027	1.014	1.001	0.988	0.975	0.961	0.948	0.934					
	1.029	1.017	1.004	0.991	0.978	0.965	0.951	0.937						

Table E11C.7. Fast Flux Distribution by Pin in MFA-1 at EOC 11C

CORE POSITION 1404

[illegible]

Table E11C.8. Fast Flux Distribution by Pin in MFA-2 at EOC 11C

CORE POSITION 2506

							1.078	1.062	1.045	1.028	1.011	0.993	0.976	0.958
							1.085	1.068	1.052	1.035	1.018	1.001	0.984	0.966 0.948
							1.090	1.074	1.058	1.042	1.025	1.008	0.991	0.974 0.956 0.939
							1.095	1.079	1.063	1.047	1.031	1.015	0.998	0.981 0.964 0.946 0.929
							1.099	1.084	1.068	1.052	1.037	1.020	1.004	0.988 0.971 0.954 0.936 0.918
							1.102	1.087	1.072	1.057	1.041	1.026	1.010	0.993 0.977 0.960 0.943 0.926 0.908
							1.104	1.090	1.075	1.060	1.045	1.030	1.015	0.999 0.983 0.967 0.950 0.933 0.916 0.898
							1.105	1.091	1.077	1.063	1.049	1.034	1.019	1.004 0.988 0.972 0.956 0.939 0.922 0.905 0.887
							1.092	1.079	1.065	1.052	1.037	1.023	1.008	0.993 0.977 0.961 0.945 0.929 0.912 0.894
							1.080	1.067	1.054	1.040	1.026	1.011	0.997	0.982 0.966 0.951 0.934 0.918 0.901
							1.068	1.055	1.042	1.028	1.014	1.000	0.986	0.971 0.955 0.940 0.923 0.907
							1.056	1.043	1.030	1.017	1.003	0.989	0.974	0.960 0.944 0.928 0.912
							1.044	1.032	1.019	1.006	0.992	0.978	0.963	0.948 0.933 0.917
							1.032	1.020	1.007	0.994	0.980	0.966	0.952	0.937 0.921
							1.021	1.009	0.996	0.983	0.969	0.955	0.940	0.925

Table E11C.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 11C

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.3584E+15	2.1559E+15
SE	2.1348E+15	2.2469E+15
SW	2.0568E+15	2.0527E+15
W	2.1444E+15	1.8210E+15
NW	2.2356E+15	1.7901E+15
NE	2.4305E+15	1.9524E+15

Table E11C.10. Assembly Outlet Temperatures and
Flow Rates at EOC 11C

CORE POS.	CALCULATED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1405	1035	111070
1304	1040	194070
1404	993	197790
1406	855	14150
1506	877	201110
1507	869	201110
1508	964	181030
2506	1013	111070
2404	1001	197790
2405	876	191240
2505	918	201110
2507	872	201110
2606	905	164920
2607	937	158170

Assembly flows are based on a calculated core pressure drop of 103.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E11C.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 11C

1	temperature map for bundle 24	ASSEMBLY NO. 1485	MFA-1
	axial height 44.988 in		
	852	874 877 879 880 879 879	891
	892	901 904 905 905 904 903	911
		921 920 931 931 930 929 920 927 930	
	877 900	922 977 1009 1015 1016 1015 1013 1007 901 937	929 920
		970 951 993 993 992 989 978	
	879 903	926 991 1030 1044 1045 1045 1043 1036 1011	
		1009 1038 1054 1054 1053 1050 1030 995 942	933 925
	801 906	930 996 1040 1065 1069 1069 1067 1063 1047 1001 944	935 920
		1018 1054 1064 1065 1065 1062 1052 1020	
		1022 1059 1071 1073 1074 1073 1072 1069 1058 1023	
	803 909	933 1000 1052 1070 1074 1075 1075 1073 1069 1051 1003 945	930 931
		1025 1063 1075 1070 1070 1070 1070 1070 1070 1070 1070 1070	
	804 911	936 1003 1055 1073 1070 1079 1079 1079 1077 1072 1064 1005 944	939 933
		1027 1065 1070 1001 1002 1002 1002 1001 1000 1076 1054 1027	
	805 912	930 1003 1057 1076 1001 1003 1003 1003 1003 1002 1000 1075 1056 1004 943	939 934
		1022 1066 1000 1004 1005 1005 1005 1005 1004 1003 1079 1065 1023	
	804 911	937 951 1053 1077 1004 1006 1006 1006 1006 1006 1005 1003 1076 1052 994	942 930 934
	859 916	932 954 1079 1006 1006 1006 1006 1006 1006 1006 1006 1006 1006 1006 1006	941 927 911
	931 934	936 1025 1065 1004 1000 1003 1000 1000 1000 1000 1000 1000 1000 1000	956 947 924 899
		942 939 942 1000 1004 1000 1001 1002 1002 1002 1001 1000 1004 1005 1012 952	926 900
		1035 1075 1000 1001 1002 1003 1003 1003 1002 1000 1000 1076 1037	
	938 943	947 1014 1000 1007 1003 1004 1004 1005 1004 1003 1000 1070 1017 954	927 900
		1039 1079 1001 1004 1005 1005 1005 1005 1005 1005 1005 1005 1005 1005	
	940 946	951 1017 1071 1030 1035 1006 1007 1007 1006 1006 1006 1006 1006 1006	928 900
		1042 1001 1003 1006 1007 1007 1007 1007 1007 1007 1007 1007 1007 1007	
		942 949 955 1020 1073 1031 1005 1006 1007 1006 1002 1075 1021 955	920 900
		1044 1001 1002 1004 1005 1005 1005 1005 1005 1005 1005 1005 1005	
	942 950	957 1020 1069 1003 1007 1007 1007 1007 1007 1007 1007 1007 1007	928 901
		1040 1070 1077 1079 1079 1079 1079 1079 1079 1079 1079 1079 1079	
	942 949	956 1009 1041 1049 1051 1052 1051 1044 1011 955	929 903
		1000 1023 1027 1020 1020 1020 1020 1020 1020 1020 1020 1020 1020	
		952 954 950 951 954 966 966 963 957	
		949 954 950 961 963 964 964 961 943	
	945	955 950 900 962 962 961 959	929

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Table E11C.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 11C

Z

1 Temperature map for bundle 24 ASSEMBLY NO. 1485 MFA-1

axial height 50.500 in

673	685	688	690	691	692	692	692	694	
906	914	918	919	919	919	919	919	926	
	937	943	946	947	946	945	944	945	948
889	913	937	975	980	993	993	991	980	978
			1004	1035	1043	1045	1044	1042	1034
891	916	948	989	1035	1052	1055	1054	1058	1035
			1014	1053	1066	1069	1069	1066	1065
893	919	944	995	1046	1067	1073	1074	1073	1072
			1019	1069	1075	1079	1079	1079	1073
895	922	948	999	1051	1073	1088	1081	1081	1079
			1022	1064	1079	1084	1095	1084	1083
896	924	951	1001	1054	1077	1084	1086	1086	1085
			1023	1065	1082	1087	1089	1089	1088
895	925	953	1001	1055	1079	1087	1089	1089	1086
			1017	1065	1084	1090	1092	1092	1093
896	924	951	989	1049	1079	1089	1092	1093	1093
912	930	948							
945	948	951	989	1051	1081	1094	1095	1095	1094
			1026	1069	1088	1094	1095	1096	1094
949	953	957	1005	1062	1087	1095	1098	1099	1099
			1031	1076	1093	1098	1099	1100	1100
953	958	962	1012	1067	1091	1099	1101	1101	1099
			1036	1079	1096	1101	1102	1102	1101
955	961	967	1017	1084	1101	1103	1103	1103	1102
			1039	1082	1098	1102	1103	1103	1099
957	964	971	1019	1072	1093	1100	1101	1102	1101
			1041	1081	1094	1098	1099	1099	1096
957	965	973	1019	1066	1083	1097	1098	1098	1094
			1035	1066	1076	1079	1077	1069	1036
957	965	973	1007	1036	1045	1048	1049	1048	1049
			1007	1021	1025	1028	1029	1029	1012
966	971	974	977	980	981	981	978	962	
			970	971	975	979	982	984	981
962	971	974	976	977	978	977	975	948	

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Temperature map for bundle 50,500 in axial height	ASSEMBLY NO. 2506 MFA-2									
926	912	912	911	969	907	984	901	892		
936	930	931	929	927	924	928	917	911		
	946	949	950	948	944	940	936	932	930	
950	949	948	904	995	992	980	962	960		
	1013	1040	1045	1043	1040	1035	1024	994		
953	953	954	959	1042	1054	1054	1051	1047	1040	1023
	1023	1059	1065	1065	1062	1059	1051	1036	998	
956	957	959	1006	1052	1068	1070	1067	1063	1059	1049
	1028	1064	1074	1073	1069	1065	1060	1053	1036	996
950	960	963	1010	1057	1074	1072	1067	1063	1050	1040
	1001	1050	1070	1076	1072	1067	1063	1050	1040	1023
959	963	967	1012	1060	1070	1074	1070	1065	1050	1044
	1032	1070	1080	1079	1074	1069	1064	1059	1054	1046
960	964	969	1012	1061	1079	1081	1077	1072	1066	1061
	1027	1069	1082	1081	1077	1071	1066	1061	1056	1050
959	963	967	1000	1055	1072	1079	1074	1060	1063	1055
959	963	967	1000	1055	1072	1079	1074	1060	1063	1055
892	926	960	987	1054	1078	1082	1078	1073	1068	1062
	1024	1068	1081	1080	1076	1070	1065	1060	1055	1049
892	926	960	1000	1059	1078	1077	1072	1066	1061	1055
	1023	1068	1078	1075	1069	1064	1059	1054	1048	1030
891	927	961	1009	1057	1074	1075	1071	1066	1061	1056
	1020	1065	1074	1072	1060	1063	1056	1053	1045	1029
890	926	961	1007	1054	1069	1070	1067	1062	1057	1052
	1025	1060	1069	1067	1063	1059	1054	1046	1030	963
888	925	960	1004	1040	1063	1063	1060	1055	1050	1042
	1020	1053	1060	1059	1054	1050	1044	1029	993	
886	922	957	998	1036	1047	1046	1043	1038	1033	1015
	1009	1033	1037	1035	1032	1027	1017	990		
882	918	952	902	1004	1000	1005	1004	1000	991	963
	978	997	998	997	984	979	965			
900	900	945	943	943	944	944	941	936	931	
	917	917	916	916	914	912	900			
872	869	869	860	807	895	883	880			

Table E11C.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 11C

1	temperature map for bundle 24	ASSEMBLY NO. 1485	MFA-1
axial height	92,000 in		
898		986 969 912 914 916 918 928 930	
932		930 942 944 946 947 949 950 957	
		* 965 969 973 975 976 977 978 988 984 *	
916 941 *		979 968 992 994 994 992 999	
		977 992 1000 1003 1003 1002 998 993 988 *	972 956
917 941 *		998 1008 1019 1023 1023 1020 1013 1002 *	
		984 1008 1023 1036 1032 1031 1025 1015 1001 992 *	975 959
918 943 *		998 1023 1039 1047 1049 1047 1041 1028 1011	
		989 1019 1040 1051 1056 1056 1052 1042 1026 1006 993 *	977 961
919 944 *		1003 1032 1053 1063 1067 1067 1063 1054 1038 1015	
		992 1025 1050 1064 1070 1072 1070 1064 1052 1032 1008 994 *	979 963
919 946 *		1005 1037 1060 1072 1076 1079 1077 1072 1061 1042 1017	
		971 994 1028 1055 1071 1079 1081 1081 1078 1071 1057 1034 1009 994 *	988 965
920 946 *		1005 1038 1063 1077 1083 1086 1086 1083 1077 1064 1042 1016	
		992 1026 1055 1074 1083 1087 1088 1087 1083 1074 1057 1033 1007 995 *	981 966
919 946 *		999 1023 1061 1070 1087 1090 1091 1090 1086 1078 1063 1039 1012	
940 955 *		986 1010 1050 1073 1085 1090 1092 1092 1090 1085 1073 1053 1026 1003 995 *	981 967
975 974 *		987 1020 1052 1075 1087 1092 1094 1094 1092 1087 1075 1055 1028 1005 1000 *	978 958
		1002 1036 1065 1082 1091 1094 1075 1094 1091 1093 1067 1042 1015	
978 976 *		990 1033 1063 1082 1091 1095 1096 1095 1092 1083 1065 1040 1014 1004 *	985 966
		1015 1047 1072 1087 1094 1096 1094 1088 1074 1051 1024	
981 992 *		1006 1041 1069 1085 1093 1096 1096 1093 1086 1078 1046 1019 1006 *	987 967
		1019 1052 1076 1089 1094 1096 1095 1089 1077 1056 1029	
993 996 *		998 1011 1044 1069 1084 1091 1093 1091 1085 1071 1048 1022 1007 *	988 968
		1023 1054 1074 1085 1090 1090 1086 1076 1057 1031	
995, 999 *		993 1014 1043 1065 1076 1081 1082 1078 1067 1047 1022 1008 *	989 969
		1024 1049 1066 1074 1077 1075 1068 1053 1038	
996 991 *		996 1013 1036 1052 1068 1063 1061 1055 1041 1021 1008 *	990 971
		1020 1037 1048 1053 1055 1051 1042 1026	
987 992 *		997 1009 1022 1030 1035 1037 1035 1029 1017 1008 *	992 975
		1010 1018 1024 1027 1028 1026 1019	
996		* 997 1000 1003 1007 1010 1013 1014 1013 1011 *	
996		* 1001 1004 1007 1009 1011 1011 1011 1001	
994		1003 1005 1007 1008 1000 1000 1008	991

Table E11C.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 11C

axial height	temperature as for bundle 51	ASSEMBLY NO. 2596	MFA-2
954		938 938 937 935 934 932 938	917
	962	954 954 952 958 947 945 943	936
		969 959 959 967 964 961 955 955	
		982 987 988 985 981 975 967	
977 974	972	983 994 998 997 994 988 988 967 957	939 921
		997 1011 1017 1018 1014 1007 996 979	
979 978	976	993 1012 1027 1025 1020 1018 995 974 959	941 923
		1006 1027 1039 1042 1040 1035 1025 1008 984	
981 981	981	1008 1024 1041 1048 1044 1036 1023 1002 975 959	942 925
		1012 1036 1051 1057 1053 1045 1032 1012 984	
983 984	985	1005 1041 1059 1059 1051 1050 1053 1043 1027 1003	975 950
		1015 1041 1059 1055 1056 1052 1057 1048 1033 1011	982
984 987	989	1007 1034 1054 1055 1050 1066 1061 1054 1043 1026 1008	972 957
		1016 1042 1068 1069 1070 1067 1062 1055 1046 1038 1006 979	
985 988	991	1006 1032 1055 1067 1071 1063 1055 1058 1052 1048 1021	995 956 956
		1010 1037 1059 1069 1072 1078 1065 1068 1053 1042 1024 999 973	
985 988	992	1008 1024 1058 1065 1071 1067 1062 1055 1048 1034 1013	967 964 958
986 986	993	1005 1045 1065 1071 1071 1067 1062 1055 1047 1034 1013	987 966 968
917 952	985	1008 1036 1057 1069 1071 1069 1064 1059 1051 1041 1024 1008	975
		1012 1038 1053 1066 1069 1067 1064 1060 1053 1044 1029 1007 982	
916 951	985	1002 1048 1058 1069 1067 1064 1060 1053 1044 1029 1007 982	958 936
		1012 1048 1058 1069 1067 1064 1060 1053 1044 1029 1007 982	
915 950	985	1003 1031 1052 1062 1064 1063 1057 1050 1049 1024 1001	976 963
		1013 1033 1055 1062 1068 1052 1044 1036 1018 985	
913 949	984	1003 1047 1055 1056 1053 1048 1038 1024 1002 977 963	952 948
		1011 1034 1048 1053 1052 1048 1048 1020 1009 985	
		983 1008 1022 1037 1043 1042 1038 1031 1019 1008	977 962
		1006 1024 1034 1037 1035 1036 1028 1005 983	
985 946	981	994 1010 1019 1022 1021 1015 1027 993 974 951	952 942
		997 1008 1013 1014 1011 1005 984 978	
		987 942	977 965 992 995 996 994 989 981 969 968
		982 985 987 986 983 978 978	
		972 978 978 978 969 968	966 963 968
935	942	941 941 948 936	936 933
		913 912 911 910 988 986 983	913

Table E11C.17. Composition of MFA-1 at EOC 11C

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.7575E-06
			U-238	7.0573E-03	6.7301E-03
			Pu-239	0.0000E+00	2.5115E-04
			Pu-240	0.0000E+00	1.7172E-05
			FP	0.0000E+00	6.2090E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	7.0773E-06
			U-238	4.4499E-03	4.2063E-03
			Pu-239	1.7520E-03	1.3205E-03
			Pu-240	2.2340E-04	3.0166E-04
			Pu-241	1.9280E-05	2.6397E-05
			Pu-242	4.7430E-06	5.4252E-06
			Am-241	7.6680E-07	3.4356E-06
			FP	0.0000E+00	5.8808E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	6.4004E-06
			U-238	4.4499E-03	4.1454E-03
			Pu-239	1.7520E-03	1.2282E-03
			Pu-240	2.2340E-04	3.0202E-04
			Pu-241	1.9280E-05	2.6662E-05
			Pu-242	4.7430E-06	5.4463E-06
			Am-241	7.6680E-07	3.3349E-06
			FP	0.0000E+00	7.4104E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	6.0398E-06
			U-238	4.4499E-03	4.1138E-03
			Pu-239	1.7520E-03	1.1839E-03
			Pu-240	2.2340E-04	3.0641E-04
			Pu-241	1.9280E-05	2.7625E-05
			Pu-242	4.7430E-06	5.5487E-06
			Am-241	7.6680E-07	3.3225E-06
			FP	0.0000E+00	8.1206E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	6.1598E-06
			U-238	4.4499E-03	4.1244E-03
			Pu-239	1.7520E-03	1.1979E-03
			Pu-240	2.2340E-04	3.0446E-04
			Pu-241	1.9280E-05	2.7228E-05
			Pu-242	4.7430E-06	5.5058E-06
			Am-241	7.6680E-07	3.3223E-06
			FP	0.0000E+00	7.8942E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	6.7531E-06
			U-238	4.4499E-03	4.1756E-03
			Pu-239	1.7520E-03	1.2695E-03
			Pu-240	2.2340E-04	2.9583E-04
			Pu-241	1.9280E-05	2.5521E-05
			Pu-242	4.7430E-06	5.3343E-06
			Am-241	7.6680E-07	3.3337E-06
			FP	0.0000E+00	6.7708E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	7.6721E-06
			U-238	4.4499E-03	4.2501E-03
			Pu-239	1.7520E-03	1.3876E-03
			Pu-240	2.2340E-04	2.8799E-04
			Pu-241	1.9280E-05	2.4070E-05
			Pu-242	4.7430E-06	5.2190E-06
			Am-241	7.6680E-07	3.4117E-06
			FP	0.0000E+00	4.9309E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.0407E-05
			U-238	7.0573E-03	6.8351E-03
			Pu-239	0.0000E+00	1.8106E-04
			Pu-240	0.0000E+00	7.4080E-06
			FP	0.0000E+00	3.6212E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E11C.18. Composition of MFA-2 at EOC 11C

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.8072E-06
			U-238	7.0573E-03	6.7395E-03
			Pu-239	0.0000E+00	2.4468E-04
			Pu-240	0.0000E+00	1.6742E-05
			FP	0.0000E+00	5.9589E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	6.6925E-06
			U-238	4.4270E-03	4.1888E-03
			Pu-239	1.7483E-03	1.3242E-03
			Pu-240	2.2290E-04	2.9974E-04
			Pu-241	1.9040E-05	2.6042E-05
			Pu-242	4.7330E-06	5.3867E-06
			Am-241	7.5700E-07	3.4329E-06
			FP	0.0000E+00	5.7651E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	6.0331E-06
			U-238	4.4270E-03	4.1262E-03
			Pu-239	1.7483E-03	1.2295E-03
			Pu-240	2.2290E-04	3.0078E-04
			Pu-241	1.9040E-05	2.6432E-05
			Pu-242	4.7330E-06	5.4146E-06
			Am-241	7.5700E-07	3.3330E-06
			FP	0.0000E+00	7.3338E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	5.6805E-06
			U-238	4.4270E-03	4.0930E-03
			Pu-239	1.7483E-03	1.1833E-03
			Pu-240	2.2290E-04	3.0550E-04
			Pu-241	1.9040E-05	2.7466E-05
			Pu-242	4.7330E-06	5.5223E-06
			Am-241	7.5700E-07	3.3262E-06
			FP	0.0000E+00	8.0692E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	5.7831E-06
			U-238	4.4270E-03	4.1026E-03
			Pu-239	1.7483E-03	1.1961E-03
			Pu-240	2.2290E-04	3.0370E-04
			Pu-241	1.9040E-05	2.7099E-05
			Pu-242	4.7330E-06	5.4832E-06
			Am-241	7.5700E-07	3.3262E-06
			FP	0.0000E+00	7.8647E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	6.3286E-06
			U-238	4.4270E-03	4.1527E-03
			Pu-239	1.7483E-03	1.2660E-03
			Pu-240	2.2290E-04	2.9525E-04
			Pu-241	1.9040E-05	2.5407E-05
			Pu-242	4.7330E-06	5.3163E-06
			Am-241	7.5700E-07	3.3341E-06
			FP	0.0000E+00	6.7654E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	7.1711E-06
			U-238	4.4270E-03	4.2265E-03
			Pu-239	1.7483E-03	1.3816E-03
			Pu-240	2.2290E-04	2.8812E-04
			Pu-241	1.9040E-05	2.4063E-05
			Pu-242	4.7330E-06	5.2137E-06
			Am-241	7.5700E-07	3.4110E-06
			FP	0.0000E+00	4.9524E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.0209E-05
			U-238	7.0573E-03	6.8283E-03
			Pu-239	0.0000E+00	1.8570E-04
			Pu-240	0.0000E+00	8.3289E-06
			FP	0.0000E+00	3.7677E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.14 Cycle 12A-1

Table B12A-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 12A-1

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE		TOTAL PWR
1405	1.109E-01	3.919E+00	6.464E-02		4.095E+00
1304	0.000E+00	7.031E+00	0.000E+00		7.031E+00
1406	1.070E-02	4.752E+00	7.834E-03		4.770E+00
1404	0.000E+00	6.214E+00	0.000E+00		6.214E+00
1508	0.000E+00	5.408E+00	0.000E+00		5.408E+00
1506	1.520E-02	3.936E+00	1.021E-02		3.962E+00
1507	1.238E-02	3.893E+00	9.092E-03		3.915E+00
2506	8.925E-02	3.128E+00	5.334E-02		3.271E+00
2404	0.000E+00	5.785E+00	0.000E+00		5.785E+00
2505	8.139E-03	4.214E+00	5.409E-03		4.227E+00
2405	1.665E-02	3.320E+00	1.114E-02		3.348E+00
2606	1.444E-02	3.192E+00	8.182E-03		3.215E+00
2607	6.058E-03	3.562E+00	4.890E-03		3.573E+00
2507	1.182E-02	3.324E+00	8.315E-03		3.344E+00

Table B12A-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 12A-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.772E+15	2.527E+15
MFA-2	2506	2.979E+15	1.912E+15

Table B12A-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 12A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6833E-02	1.3450E-02	0.0000E+00
-92.78	5.7474E-02	2.5967E-02	0.0000E+00
-87.78	9.2005E-02	4.1580E-02	0.0000E+00
-82.78	1.3308E-01	6.2106E-02	0.0000E+00
-77.78	1.8358E-01	8.9861E-02	0.0000E+00
-72.15	2.4176E-01	1.2626E-01	0.0000E+00
-65.90	3.0199E-01	1.7396E-01	0.0000E+00
-60.35	3.6638E-01	2.4095E-01	1.3206E-01
-55.49	4.5011E-01	3.2754E-01	1.5013E-01
-50.62	5.4573E-01	4.3895E-01	1.7281E-01
-47.17	6.2060E-01	5.4162E-01	1.9434E-01
-43.58	6.9875E-01	6.5641E-01	7.6923E-01
-38.45	8.1414E-01	7.9845E-01	8.6201E-01
-33.32	9.2159E-01	9.1922E-01	9.6570E-01
-28.20	1.0150E+00	1.0183E+00	9.9638E-01
-23.07	1.0932E+00	1.0993E+00	1.0715E+00
-17.94	1.1544E+00	1.1615E+00	1.1304E+00
-12.82	1.1975E+00	1.2042E+00	1.1378E+00
-7.69	1.2231E+00	1.2297E+00	1.1617E+00
-2.56	1.2308E+00	1.2377E+00	1.1689E+00
2.56	1.2208E+00	1.2284E+00	1.1703E+00
7.69	1.1929E+00	1.2012E+00	1.1437E+00
12.82	1.1478E+00	1.1571E+00	1.1009E+00
17.94	1.0865E+00	1.0972E+00	1.0924E+00
23.07	1.0087E+00	1.0191E+00	1.0151E+00
28.20	9.1615E-01	9.2450E-01	9.2309E-01
33.32	8.1105E-01	8.1502E-01	8.8254E-01
38.45	6.9459E-01	6.8761E-01	7.6164E-01
43.58	5.7304E-01	5.4510E-01	6.4663E-01
47.17	4.9448E-01	4.4035E-01	1.2726E-01
50.62	4.2518E-01	3.5307E-01	1.0612E-01
55.49	3.4192E-01	2.6175E-01	8.4999E-02
60.35	2.6760E-01	1.8925E-01	6.8208E-02
64.98	2.1693E-01	1.4272E-01	0.0000E+00
69.39	1.8428E-01	1.1597E-01	0.0000E+00
76.46	1.3750E-01	8.0165E-02	0.0000E+00
86.80	8.8108E-02	4.7069E-02	0.0000E+00
98.14	5.0228E-02	2.5197E-02	0.0000E+00
110.00	2.1359E-02	1.1101E-02	0.0000E+00

Table B12A-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 12A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7692E-02	1.4268E-02	0.0000E+00
-92.78	5.9408E-02	2.7535E-02	0.0000E+00
-87.78	9.5190E-02	4.4037E-02	0.0000E+00
-82.78	1.3786E-01	6.5672E-02	0.0000E+00
-77.78	1.9054E-01	9.4822E-02	0.0000E+00
-72.15	2.5134E-01	1.3285E-01	0.0000E+00
-65.90	3.1304E-01	1.8187E-01	0.0000E+00
-60.35	3.7672E-01	2.4953E-01	1.3491E-01
-55.49	4.5983E-01	3.3613E-01	1.5201E-01
-50.62	5.5470E-01	4.4701E-01	1.7304E-01
-47.17	6.2936E-01	5.4970E-01	1.9307E-01
-43.58	7.0752E-01	6.6496E-01	7.8536E-01
-38.45	8.2215E-01	8.0620E-01	8.7456E-01
-33.32	9.2845E-01	9.2594E-01	9.7609E-01
-28.20	1.0207E+00	1.0239E+00	1.0030E+00
-23.07	1.0977E+00	1.1039E+00	1.0768E+00
-17.94	1.1578E+00	1.1650E+00	1.1347E+00
-12.82	1.1997E+00	1.2067E+00	1.1392E+00
-7.69	1.2240E+00	1.2310E+00	1.1618E+00
-2.56	1.2302E+00	1.2374E+00	1.1675E+00
2.56	1.2184E+00	1.2262E+00	1.1661E+00
7.69	1.1884E+00	1.1970E+00	1.1376E+00
12.82	1.1412E+00	1.1506E+00	1.0926E+00
17.94	1.0782E+00	1.0888E+00	1.0811E+00
23.07	9.9977E-01	1.0100E+00	1.0032E+00
28.20	9.0807E-01	9.1611E-01	9.1236E-01
33.32	8.0566E-01	8.0939E-01	8.7387E-01
38.45	6.9384E-01	6.8672E-01	7.5953E-01
43.58	5.7829E-01	5.5021E-01	6.5470E-01
47.17	5.0261E-01	4.4687E-01	1.2961E-01
50.62	4.3235E-01	3.5721E-01	1.0939E-01
55.49	3.4471E-01	2.6171E-01	8.8360E-02
60.35	2.6650E-01	1.8637E-01	7.1142E-02
64.98	2.1555E-01	1.3976E-01	0.0000E+00
69.39	1.8415E-01	1.1435E-01	0.0000E+00
76.46	1.3905E-01	8.0332E-02	0.0000E+00
86.80	8.9802E-02	4.7788E-02	0.0000E+00
98.14	5.1268E-02	2.5767E-02	0.0000E+00
110.00	2.1852E-02	1.1415E-02	0.0000E+00

Table B12A-1.5. Fission Power Distribution by Pin in MFA-1 at BOC 12A-1

CORE POSITION 1405

0.948	0.950	0.951	0.951	0.950	0.949	0.946	0.943
0.955	0.958	0.959	0.960	0.960	0.959	0.957	0.954
0.962	0.965	0.967	0.968	0.969	0.968	0.967	0.965
0.968	0.971	0.974	0.976	0.977	0.977	0.975	0.973
0.973	0.977	0.980	0.983	0.984	0.985	0.986	0.985
0.983	0.981	0.978	0.975	0.983	0.981	0.978	0.975
0.977	0.982	0.986	0.989	0.991	0.993	0.993	0.993
0.991	0.989	0.986	0.983	0.981	0.978	0.975	0.973
0.981	0.986	0.990	0.994	0.996	0.999	1.000	1.001
1.001	1.001	1.000	0.999	0.996	0.994	0.990	0.988
0.984	0.989	0.994	0.998	1.001	1.004	1.006	1.008
1.008	1.008	1.007	1.006	1.004	1.001	0.998	0.998
0.991	0.996	1.001	1.005	1.008	1.011	1.013	1.015
1.015	1.015	1.014	1.013	1.011	1.009	1.009	1.009
0.999	1.004	1.008	1.012	1.015	1.018	1.020	1.021
1.022	1.022	1.021	1.020	1.018	1.015	1.012	1.008
1.005	1.010	1.015	1.018	1.022	1.024	1.026	1.028
1.028	1.028	1.029	1.028	1.027	1.025	1.021	1.017
1.012	1.017	1.021	1.025	1.028	1.030	1.032	1.034
1.035	1.035	1.035	1.035	1.035	1.035	1.035	1.035
1.018	1.023	1.027	1.031	1.034	1.036	1.038	1.040
1.041	1.041	1.041	1.041	1.041	1.041	1.041	1.041
1.024	1.029	1.033	1.036	1.039	1.042	1.044	1.045
1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046
1.030	1.034	1.038	1.041	1.044	1.047	1.049	1.051

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Table B12A-1.6. Fission Power Distribution by Pin in MFA-2 at BOC 12A-1

CORE POSITION 2506

1.055	1.045	1.034	1.022	1.010	0.997	0.983	0.969							
1.060	1.049	1.039	1.027	1.015	1.003	0.989	0.975	0.960						
1.064	1.054	1.043	1.032	1.020	1.008	0.994	0.981	0.966	0.951					
1.069	1.059	1.048	1.037	1.025	1.013	1.000	0.986	0.972	0.957	0.942				
1.073	1.063	1.052	1.041	1.030	1.017	1.004	0.991	0.977	0.962	0.947	0.932			
1.078	1.067	1.057	1.046	1.034	1.022	1.009	0.996	0.982	0.968	0.953	0.938	0.922		
1.082	1.072	1.061	1.050	1.038	1.026	1.013	1.000	0.987	0.972	0.958	0.943	0.928	0.913	
1.087	1.076	1.065	1.054	1.042	1.030	1.018	1.005	0.991	0.977	0.963	0.948	0.933	0.918	0.903
1.080	1.069	1.058	1.046	1.034	1.021	1.009	0.995	0.981	0.967	0.953	0.938	0.923	0.908	
1.073	1.061	1.049	1.037	1.025	1.012	0.999	0.985	0.971	0.957	0.943	0.928	0.913		
1.064	1.053	1.041	1.028	1.016	1.003	0.989	0.975	0.961	0.947	0.932	0.918			
1.056	1.044	1.031	1.019	1.006	0.992	0.979	0.965	0.951	0.937	0.922				
1.046	1.034	1.021	1.008	0.995	0.982	0.968	0.955	0.940	0.926					
1.036	1.024	1.011	0.998	0.985	0.971	0.958	0.944	0.930						
1.025	1.013	1.000	0.987	0.974	0.960	0.947	0.933							

Table B12A-1.7. Fast Flux Distribution by Pin in MFA-1 at BOC 12A-1

CORE POSITION 1404

	0.930	0.933	0.936	0.938	0.940	0.942	0.944	0.945						
	0.939	0.941	0.944	0.946	0.949	0.951	0.952	0.954	0.955					
	0.947	0.950	0.953	0.955	0.957	0.959	0.960	0.962	0.963	0.964				
	0.956	0.958	0.961	0.963	0.965	0.967	0.969	0.970	0.971	0.972	0.972			
	0.964	0.967	0.970	0.972	0.974	0.975	0.977	0.978	0.979	0.980	0.980	0.980		
	0.973	0.975	0.978	0.980	0.982	0.984	0.985	0.986	0.987	0.987	0.988	0.988	0.987	
	0.981	0.984	0.986	0.989	0.990	0.992	0.993	0.994	0.995	0.995	0.996	0.995	0.995	0.994
0.989	0.992	0.995	0.997	0.999	1.000	1.002	1.003	1.003	1.004	1.004	1.003	1.003	1.001	1.000
1.000	1.003	1.006	1.007	1.009	1.010	1.011	1.011	1.012	1.012	1.011	1.010	1.009	1.008	
1.011	1.014	1.016	1.017	1.019	1.019	1.020	1.020	1.020	1.019	1.018	1.017	1.015		
1.022	1.024	1.026	1.027	1.028	1.028	1.028	1.028	1.028	1.027	1.025	1.023			
1.032	1.034	1.035	1.036	1.037	1.037	1.037	1.036	1.035	1.033	1.031				
1.042	1.043	1.044	1.045	1.045	1.045	1.044	1.043	1.042	1.040					
1.051	1.052	1.053	1.054	1.053	1.053	1.052	1.050	1.048						
1.060	1.061	1.062	1.062	1.061	1.060	1.058	1.056							

Table B12A-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 12A-1

CORE POSITION 2506

	1.084	1.067	1.050	1.032	1.014	0.996	0.978	0.959						
	1.090	1.074	1.056	1.039	1.021	1.004	0.986	0.968	0.949					
	1.096	1.079	1.062	1.045	1.028	1.011	0.993	0.975	0.957	0.939				
	1.100	1.084	1.067	1.051	1.034	1.017	1.000	0.982	0.965	0.947	0.928			
	1.103	1.087	1.072	1.055	1.039	1.022	1.005	0.988	0.971	0.954	0.936	0.918		
	1.106	1.090	1.075	1.059	1.043	1.027	1.011	0.994	0.977	0.960	0.943	0.925	0.907	
	1.107	1.092	1.078	1.062	1.047	1.031	1.015	0.999	0.983	0.966	0.949	0.932	0.914	0.896
1.108	1.094	1.079	1.065	1.050	1.035	1.019	1.004	0.988	0.971	0.955	0.938	0.921	0.903	0.885
	1.094	1.080	1.066	1.052	1.037	1.023	1.007	0.992	0.976	0.960	0.944	0.927	0.910	0.892
	1.081	1.067	1.054	1.040	1.025	1.011	0.996	0.980	0.965	0.949	0.932	0.915	0.898	
	1.068	1.054	1.041	1.027	1.013	0.999	0.984	0.969	0.953	0.937	0.921	0.904		
	1.055	1.042	1.029	1.015	1.001	0.987	0.972	0.957	0.941	0.925	0.909			
	1.042	1.029	1.016	1.003	0.989	0.975	0.960	0.945	0.929	0.913				
	1.030	1.017	1.004	0.991	0.977	0.963	0.948	0.933	0.917					
	1.017	1.005	0.992	0.979	0.965	0.951	0.936	0.921						

Table B12A-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 12A-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.5860E+15	2.0415E+15
SE	2.3848E+15	2.1419E+15
SW	2.3236E+15	1.9538E+15
W	2.4376E+15	1.7251E+15
NW	2.5851E+15	1.6905E+15
NE	2.6934E+15	1.8413E+15

Table B12A-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 12A-1

CORE POS.	CALCULATED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1405	1085	108910
1304	1071	190310
1404	1020	192650
1406	948	197210
1506	902	197210
1507	898	197210
1508	1002	177530
2506	1003	108910
2404	995	193950
2405	869	197230
2505	909	197210
2507	865	197210
2606	897	161730
2607	927	155100

Assembly flows are based on a calculated core pressure drop of 99.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B12A-1.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 12A-1

1 temperature map for bundle 24 axial height 44.882 in	ASSEMBLY NO. 1405	MFA-1
889	933 987 989 910 910 910 989	923
924	935 938 939 939 939 938 937	946
957 965 969 969 967 966 965 968		
985 932	1023 1039 1046 1049 1039 1036 1024	
	1057 1091 1099 1100 1108 1098 1099 1061	
989 935	962 1037 1091 1107 1110 1111 1110 1106 1092 1044 981	971 961
918 939	1087 1106 1128 1122 1123 1122 1128 1109 1071	
912 941	1071 1114 1127 1131 1132 1132 1131 1126 1115 1075	
912 943	1045 1105 1126 1132 1133 1133 1132 1126 1107 1052 984	976 967
912 944	1073 1117 1131 1135 1136 1136 1135 1132 1119 1078	
	1074 1119 1134 1138 1139 1140 1140 1136 1135 1122 1079	
	1087 1121 1139 1144 1146 1147 1148 1148 1147 1143 1127 1079	
965 971	1051 1115 1138 1145 1148 1150 1150 1149 1143 1121 1061 992	962 931
968 975	1081 1127 1143 1147 1149 1150 1151 1151 1147 1133 1089	
	1086 1131 1146 1150 1152 1153 1153 1152 1147 1126 1066 994	964 934
970 978	986 1061 1122 1144 1151 1153 1154 1155 1154 1149 1129 1068 994	965 935
971 981	1069 1134 1149 1152 1154 1155 1155 1152 1139 1096	
	1091 1133 1146 1150 1151 1152 1150 1139 1097	
971 982	992 1064 1119 1136 1140 1142 1143 1140 1125 1068 993	965 936
	1065 1120 1123 1132 1133 1133 1125 1091	
970 988	991 1051 1087 1096 1099 1101 1101 1084 1056 991	964 936
	1051 1067 1072 1074 1075 1073 1058	
	986 988 993 997 1000 1002 1003 1000 993	
988	967 991 994 997 988 988 995	974
974	986 998 992 993 993 992 998	954

Table B12A-1.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 12A-1

1	temperature map for bundle 51	ASSEMBLY NO. 2596	MFA-2
axial height	44.000 in		
938 928	• 327 979 1007 1010 1008 1095 1008 992 962 913 • 898 883	853 853 892 890 888 886 883	874
933 932	• 932 953 1036 1045 1044 1040 1037 1031 1016 971 914 • 980 885	910 911 989 987 984 981 987	031
935 936	• 937 998 1045 1056 1052 1048 1043 1036 1018 970 912 • 889 885	923 927 928 926 923 928 915 911 989 •	
937 939	• 941 1082 1048 1060 1060 1058 1051 1047 1042 1034 1015 967 969 • 896 884	978 988 987 985 981 976 952 •	
938 941	• 944 1085 1051 1063 1062 1050 1055 1046 1043 1038 1030 1011 963 906 • 894 882	979 988 987 985 981 976 952 •	
939 942	• 946 1085 1063 1066 1065 1060 1055 1049 1044 1040 1035 1026 1007 958 903 • 831 879	979 988 987 985 981 976 952 •	
938 941	• 945 934 1049 1066 1067 1062 1057 1051 1046 1041 1036 1031 1022 999 947 991 • 869 877	979 988 987 985 981 976 952 •	
859 919	• 938	979 988 987 985 981 976 952 •	992 • 869 875
874 906	• 937 992 1048 1065 1066 1062 1056 1051 1045 1040 1036 1029 1021 998 948 988 • 886 888	979 988 987 985 981 976 952 •	
874 907	• 930 1002 1051 1064 1063 1058 1052 1047 1042 1037 1032 1024 1006 988 911 • 981 891	979 988 987 985 981 976 952 •	
874 907	• 939 1002 1048 1060 1058 1054 1049 1044 1039 1034 1026 1008 984 912 • 963 894	979 988 987 985 981 976 952 •	
873 906	• 938 939 1044 1055 1054 1058 1045 1040 1036 1028 1018 965 913 • 905 896	979 988 987 985 981 976 952 •	
871 984	• 937 995 1039 1049 1049 1044 1040 1035 1029 1021 966 912 • 985 898	979 988 987 985 981 976 952 •	
869 982	• 934 998 1029 1037 1035 1031 1028 1022 1008 965 911 • 965 899	979 988 987 985 981 976 952 •	
865 867	• 929 975 998 1001 999 996 993 985 956 989 • 984 898	979 988 987 985 981 976 952 •	
860	• 921 928 921 921 921 928 918 914 986 •	979 988 987 985 981 976 952 •	
855	• 871 871 871 878 868 866 862	979 988 987 985 981 976 952 •	871

Table B12A-1.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 12A-1

1 temperature map for bundle 24		ASSEMBLY NO. 1485 MFA-1													
axial height 50.500 in															
		982		916	920	922	923	924	924	924		938			
			939		950	953	955	955	955	955	955	964			
				975	982	986	987	986	985	985	985	989			
					1020	1036	1040	1040	1039	1035	1023				
	919	940	975	1010	1053	1062	1063	1063	1061	1053	1027	996	963	970	
					1052	1087	1097	1099	1099	1097	1088	1057			
	921	951	979	1034	1087	1106	1111	1112	1111	1106	1089	1044	1002	989 975	
					1062	1107	1123	1126	1127	1126	1123	1109	1069		
	923	954	983	1040	1099	1123	1130	1132	1132	1130	1124	1102	1050	1004 991 979	
					1067	1115	1132	1137	1130	1130	1132	1116	1073		
	925	956	986	1044	1104	1130	1130	1140	1141	1140	1130	1131	1107	1053 1004 993 981	
					1070	1118	1136	1142	1143	1144	1144	1142	1137	1120 1075	
	926	958	989	1046	1107	1133	1142	1144	1145	1145	1145	1143	1135	1110 1053 1003 994 983	
					1070	1120	1139	1145	1147	1148	1148	1146	1141	1123 1076	
	926	959	991	1045	1107	1135	1144	1147	1149	1149	1149	1146	1137	1111 1051 1002 993 984	
					1063	1117	1140	1147	1150	1151	1151	1152	1151	1149 1143 1122 1069	
	924	957	989	1030	1099	1133	1146	1150	1151	1152	1153	1152	1149	1137 1104 1039 999 992 984	
	941	963	984											1000 977 954	
	977	982	987	1030	1100	1135	1140	1152	1153	1154	1155	1155	1154	1151 1140 1107 1042 1006 975 943	
					1065	1120	1143	1151	1154	1155	1156	1156	1154	1140 1126 1074	
	981	987	993	1040	1113	1142	1152	1155	1157	1158	1158	1156	1147	1120 1060 1011 979 946	
					1077	1120	1140	1154	1157	1158	1159	1158	1153	1134 1006	
	984	992	999	1050	1110	1146	1155	1158	1160	1160	1160	1159	1151	1125 1066 1013 981 949	
					1002	1132	1151	1157	1160	1161	1161	1161	1156	1130 1090	
	986	995	1004	1060	1122	1140	1157	1160	1161	1162	1161	1153	1120	1060 1014 982 950	
					1006	1135	1153	1159	1161	1162	1161	1157	1140	1092	
	987-990	1000	1063	1123	1140	1156	1158	1159	1159	1159	1152	1120	1069	1013 983 951	
					1007	1133	1149	1154	1156	1156	1153	1138	1092		
	988	999	1011	1062	1115	1135	1141	1143	1144	1140	1121	1066	1012	982 952	
					1000	1116	1127	1131	1132	1131	1122	1085			
	987	990	1009	1049	1082	1092	1096	1098	1097	1088	1054	1011	982	952	
					1040	1065	1071	1074	1075	1072	1057				
					1006	1007	1012	1016	1020	1023	1023	1021	1014		
					1005	1009	1013	1015	1017	1017	1014		993		
	992				1004	1007	1009	1011	1011	1010	1007				

Table B12A-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 12A-1

Temperature map for bundle 51 axial height 50.500 in	ASSEMBLY NO. 2586	MFA-2
928	906 906 904 903 901 898 895	805
930	924 924 923 928 917 913 910	904
	939 942 942 946 937 933 928 924 923	
944 943	975 905 905 903 979 973 959	910 894
	1004 1031 1036 1033 1030 1028 1014 905	
947 947	991 1033 1045 1044 1041 1037 1030 1013 969 928	912 886
	1015 1040 1057 1055 1051 1047 1041 1025 809	
949 951	998 1043 1053 1068 1056 1052 1047 1039 1017 959 926	911 896
	1019 1055 1054 1063 1053 1054 1050 1042 1026 906	
951 954	956 1062 1047 1064 1065 1062 1057 1052 1047 1037 1015 966 923	909 895
	1022 1050 1067 1065 1062 1057 1052 1047 1039 1022 903	
953 955	1064 1050 1067 1065 1064 1059 1054 1049 1044 1034 1011 962 920	907 894
	1024 1060 1070 1069 1064 1059 1054 1049 1043 1035 1019 970	
953 958	1064 1051 1069 1070 1066 1061 1056 1051 1046 1040 1030 1006 957 918	905 892
	1010 1059 1071 1071 1066 1061 1055 1050 1045 1040 1031 1012 970	
959 957	982 1045 1068 1072 1068 1063 1058 1052 1047 1042 1036 1024 997 946 916	903 890
912 934	955	918 903 888
006 920	953 989 1044 1060 1071 1068 1062 1057 1052 1047 1042 1035 1024 997 946 923	912 900
	1016 1058 1070 1070 1065 1059 1054 1049 1044 1030 1010 972	
006 920	953 999 1049 1067 1060 1064 1059 1053 1048 1043 1037 1028 1005 961 927	915 903
	1020 1058 1067 1066 1061 1055 1050 1046 1040 1033 1015 979	
805 920	954 1000 1047 1053 1064 1060 1055 1050 1045 1039 1030 1000 964 928	917 906
	1019 1054 1063 1061 1057 1052 1047 1042 1034 1010 962	
004 919	954 998 1043 1059 1053 1055 1051 1046 1041 1031 1010 965 920	910 900
	1016 1049 1059 1055 1052 1048 1043 1036 1028 903	
003 910	952 955 1030 1052 1052 1049 1044 1039 1031 1010 966 927	910 910
	1011 1042 1049 1047 1039 1033 1019 903	
800 915	950 989 1026 1036 1032 1028 1022 1005 964 925	910 911
	1000 1023 1027 1025 1021 1017 1007 970	
076 911	944 973 994 990 997 994 990 981 954 923	917 910
	969 970 979 977 975 970 956	
937	935 936 936 936 935 933 928 924	
902	909 909 909 909 907 905 901	903
806	803 803 802 801 879 877 873	803

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Table E12A-1.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 12A-1

CORE POS.	* * * * *	POWER IN MEGAWATTS	* * * * *	
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1405	1.119E-01	3.826E+00	6.999E-02	4.008E+00
1304	0.000E+00	6.838E+00	0.000E+00	6.838E+00
1406	1.129E-02	4.653E+00	8.698E-03	4.673E+00
1404	0.000E+00	6.087E+00	0.000E+00	6.087E+00
1508	0.000E+00	5.298E+00	0.000E+00	5.298E+00
1506	1.520E-02	3.867E+00	1.099E-02	3.893E+00
1507	1.244E-02	3.807E+00	9.748E-03	3.829E+00
2506	9.017E-02	3.102E+00	5.823E-02	3.250E+00
2404	0.000E+00	5.700E+00	0.000E+00	5.700E+00
2505	8.598E-03	4.230E+00	6.109E-03	4.244E+00
2405	1.675E-02	3.289E+00	1.205E-02	3.317E+00
2606	1.437E-02	3.203E+00	8.960E-03	3.226E+00
2607	6.323E-03	3.533E+00	5.420E-03	3.545E+00
2507	1.189E-02	3.290E+00	8.983E-03	3.311E+00

Table E12A-1.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 12A-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.756E+15	2.503E+15
MFA-2	2506	2.999E+15	1.917E+15

Table E12A-1.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 12A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6150E-02	1.3153E-02	0.0000E+00
-92.78	5.6022E-02	2.5393E-02	0.0000E+00
-87.78	8.9688E-02	4.0660E-02	0.0000E+00
-82.78	1.2974E-01	6.0730E-02	0.0000E+00
-77.78	1.7898E-01	8.7860E-02	0.0000E+00
-72.15	2.3573E-01	1.2344E-01	0.0000E+00
-65.90	2.9439E-01	1.7008E-01	0.0000E+00
-60.35	3.5700E-01	2.3562E-01	1.3718E-01
-55.49	4.3850E-01	3.2006E-01	1.5545E-01
-50.62	5.3154E-01	4.2847E-01	1.7810E-01
-47.17	6.0438E-01	5.2824E-01	1.9927E-01
-43.58	6.8041E-01	6.3978E-01	7.5118E-01
-38.45	7.9318E-01	7.7839E-01	8.4228E-01
-33.32	8.9885E-01	8.9691E-01	9.4456E-01
-28.20	9.9156E-01	9.9483E-01	9.7190E-01
-23.07	1.0703E+00	1.0761E+00	1.0474E+00
-17.94	1.1333E+00	1.1400E+00	1.1081E+00
-12.82	1.1796E+00	1.1858E+00	1.1169E+00
-7.69	1.2098E+00	1.2158E+00	1.1451E+00
-2.56	1.2233E+00	1.2296E+00	1.1578E+00
2.56	1.2200E+00	1.2270E+00	1.1659E+00
7.69	1.1993E+00	1.2073E+00	1.1464E+00
12.82	1.1613E+00	1.1704E+00	1.1106E+00
17.94	1.1063E+00	1.1171E+00	1.1123E+00
23.07	1.0333E+00	1.0440E+00	1.0397E+00
28.20	9.4334E-01	9.5209E-01	9.5054E-01
33.32	8.3880E-01	8.4324E-01	9.1747E-01
38.45	7.2089E-01	7.1402E-01	7.9473E-01
43.58	5.9654E-01	5.6771E-01	6.7702E-01
47.17	5.1581E-01	4.5961E-01	1.3950E-01
50.62	4.4444E-01	3.6931E-01	1.1723E-01
55.49	3.5813E-01	2.7442E-01	9.4642E-02
60.35	2.8079E-01	1.9880E-01	7.6437E-02
64.98	2.2800E-01	1.5008E-01	0.0000E+00
69.39	1.9387E-01	1.2204E-01	0.0000E+00
76.46	1.4484E-01	8.4474E-02	0.0000E+00
86.80	9.2905E-02	4.9663E-02	0.0000E+00
98.14	5.2973E-02	2.6600E-02	0.0000E+00
110.00	2.2503E-02	1.1714E-02	0.0000E+00

Table E12A-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 12A-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6777E-02	1.3839E-02	0.0000E+00
-92.78	5.7456E-02	2.6709E-02	0.0000E+00
-87.78	9.2080E-02	4.2718E-02	0.0000E+00
-82.78	1.3339E-01	6.3710E-02	0.0000E+00
-77.78	1.8440E-01	9.2006E-02	0.0000E+00
-72.15	2.4330E-01	1.2893E-01	0.0000E+00
-65.90	3.0306E-01	1.7657E-01	0.0000E+00
-60.35	3.6474E-01	2.4243E-01	1.3802E-01
-55.49	4.4529E-01	3.2648E-01	1.5515E-01
-50.62	5.3729E-01	4.3395E-01	1.7599E-01
-47.17	6.0973E-01	5.3337E-01	1.9556E-01
-43.58	6.8556E-01	6.4495E-01	7.6222E-01
-38.45	7.9737E-01	7.8240E-01	8.4975E-01
-33.32	9.0184E-01	8.9968E-01	9.4979E-01
-28.20	9.9337E-01	9.9653E-01	9.7481E-01
-23.07	1.0712E+00	1.0770E+00	1.0493E+00
-17.94	1.1334E+00	1.1402E+00	1.1092E+00
-12.82	1.1790E+00	1.1855E+00	1.1163E+00
-7.69	1.2085E+00	1.2150E+00	1.1439E+00
-2.56	1.2214E+00	1.2281E+00	1.1559E+00
2.56	1.2175E+00	1.2249E+00	1.1626E+00
7.69	1.1961E+00	1.2043E+00	1.1424E+00
12.82	1.1576E+00	1.1668E+00	1.1060E+00
17.94	1.1023E+00	1.1130E+00	1.1055E+00
23.07	1.0293E+00	1.0398E+00	1.0331E+00
28.20	9.4022E-01	9.4864E-01	9.4488E-01
33.32	8.3766E-01	8.4173E-01	9.1234E-01
38.45	7.2342E-01	7.1629E-01	7.9518E-01
43.58	6.0412E-01	5.7505E-01	6.8691E-01
47.17	5.2567E-01	4.6762E-01	1.4143E-01
50.62	4.5267E-01	3.7431E-01	1.2009E-01
55.49	3.6127E-01	2.7460E-01	9.7577E-02
60.35	2.7956E-01	1.9574E-01	7.8927E-02
64.98	2.2634E-01	1.4684E-01	0.0000E+00
69.39	1.9345E-01	1.2018E-01	0.0000E+00
76.46	1.4614E-01	8.4450E-02	0.0000E+00
86.80	9.4377E-02	5.0244E-02	0.0000E+00
98.14	5.3834E-02	2.7077E-02	0.0000E+00
110.00	2.2888E-02	1.1972E-02	0.0000E+00

Table E12A-1.5. Fission Power Distribution by Pin in MFA-1 at EOC 12A-1

CORE POSITION 1405

0.948 0.948 0.950 0.950 0.950 0.948 0.946 0.943

0.955 0.958 0.959 0.960 0.959 0.958 0.957 0.954 0.951

0.962 0.965 0.967 0.968 0.968 0.968 0.967 0.965 0.962 0.959

0.968 0.972 0.974 0.976 0.977 0.977 0.976 0.975 0.973 0.970 0.967

0.974 0.977 0.980 0.983 0.984 0.985 0.985 0.984 0.983 0.981 0.978 0.975

0.978 0.982 0.986 0.989 0.991 0.992 0.993 0.993 0.992 0.991 0.989 0.986 0.983

0.982 0.986 0.990 0.994 0.996 0.999 1.000 1.001 1.001 1.000 0.998 0.996 0.994 0.991

0.985 0.990 0.994 0.998 1.001 1.004 1.006 1.007 1.008 1.008 1.007 1.006 1.004 1.002 0.999

0.992 0.997 1.001 1.005 1.008 1.011 1.013 1.014 1.015 1.015 1.014 1.013 1.012 1.009

0.999 1.004 1.008 1.012 1.015 1.018 1.020 1.021 1.022 1.022 1.021 1.020 1.019

1.006 1.011 1.015 1.019 1.022 1.024 1.026 1.027 1.028 1.029 1.028 1.027

1.013 1.017 1.021 1.025 1.028 1.030 1.032 1.034 1.035 1.035 1.035

1.019 1.023 1.027 1.030 1.033 1.036 1.038 1.040 1.041 1.041

1.025 1.029 1.033 1.036 1.039 1.041 1.044 1.045 1.046

1.030 1.034 1.038 1.041 1.044 1.047 1.049 1.051

Table E12A-1.6. Fission Power Distribution by Pin in MFA-2 at EOC 12A-1

CORE POSITION 2506

[illegible]

Table E12A-1.7. Fast Flux Distribution by Pin in MFA-1 at EOC 12A-1

CORE POSITION 1404

0.930	0.933	0.935	0.938	0.940	0.942	0.943	0.945												
0.939	0.941	0.944	0.946	0.948	0.950	0.952	0.953	0.955											
0.947	0.950	0.952	0.955	0.957	0.959	0.960	0.962	0.963	0.964										
0.956	0.959	0.961	0.963	0.965	0.967	0.968	0.970	0.971	0.972	0.972									
0.965	0.967	0.970	0.972	0.973	0.975	0.976	0.978	0.979	0.979	0.980	0.980								
0.973	0.976	0.978	0.980	0.982	0.983	0.985	0.986	0.987	0.987	0.988	0.988	0.987							
0.982	0.985	0.987	0.989	0.990	0.992	0.993	0.994	0.995	0.995	0.995	0.995	0.995	0.994						
0.990	0.993	0.995	0.997	0.999	1.000	1.001	1.002	1.003	1.003	1.003	1.003	1.003	1.002	1.000					
1.001	1.004	1.006	1.008	1.009	1.010	1.011	1.011	1.011	1.011	1.011	1.010	1.009	1.008						
1.012	1.014	1.016	1.018	1.019	1.020	1.020	1.020	1.019	1.018	1.017	1.016								
1.023	1.024	1.026	1.027	1.028	1.028	1.028	1.027	1.026	1.025	1.023									
1.033	1.034	1.035	1.036	1.037	1.037	1.036	1.036	1.035	1.033	1.031									
1.042	1.044	1.045	1.045	1.045	1.045	1.044	1.043	1.041	1.040										
1.051	1.053	1.053	1.053	1.053	1.052	1.051	1.050	1.048											
1.060	1.061	1.061	1.061	1.061	1.060	1.058	1.056												

Table E12A-1.8. Fast Flux Distribution by Pin in MFA-2 at EOC 12A-1

CORE POSITION 2506

[illegible]

Table E12A-1.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 12A-1

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.5646E+15	2.0417E+15
SE	2.3645E+15	2.1455E+15
SW	2.3006E+15	1.9670E+15
W	2.4155E+15	1.7359E+15
NW	2.5619E+15	1.6943E+15
NE	2.6675E+15	1.8421E+15

Table E12A-1.10. Assembly Outlet Temperatures and
Flow Rates at EOC 12A-1

CORE POS.	CALCULATED	
	OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
1405	1073	108910
1304	1058	190310
1404	1011	192650
1406	941	197210
1506	897	197210
1507	892	197210
1508	993	177530
2506	1000	108910
2404	990	193950
2405	866	197230
2505	912	197210
2507	862	197210
2606	898	161730
2607	924	155100

Assembly flows are based on a calculated core pressure drop of 99.3 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table E12A-1.12. MFA-2 Sodium Subchannel Temperatures
at Top of Core Elevation for EOC 12A-1

axial height	ASSEMBLY NO. 2506	MFA-2	...
51	892 892 891 898 888 885 882	874	...
44,008 in	913	909 910 908 906 903 900 896	891
	922 926 927 925 922 919 915 910 908 *		
	927 926 *	977 986 906 983 980 975 961	
	930 930 *	907 1032 1035 1032 1029 1025 1016 988	909 805
		931 1033 1043 1042 1036 1029 1015 978 913 *	
	932 933 *	1016 1046 1052 1049 1046 1042 1037 1025 998	
		935 996 1042 1053 1043 1046 1041 1034 1017 968 911 *	890 804
		1019 1057 1055 1051 1046 1042 1035 1023 987	
	933 936 *	938 989 1045 1057 1053 1048 1044 1040 1032 1013 965 908 *	895 803
		1022 1054 1050 1057 1053 1048 1043 1039 1033 1019 983	
	934 936 *	1002 1040 1060 1059 1055 1050 1045 1041 1035 1028 1008 961 905 *	893 881
		1024 1056 1062 1059 1054 1043 1044 1040 1035 1023 1015 979	
	935 939 *	1042 1064 1062 1061 1055 1051 1046 1041 1037 1032 1024 1005 956 902 *	890 878
		1019 1055 1053 1051 1055 1051 1045 1041 1036 1031 1024 1009 971	
	933 938 *	942 996 1044 1062 1056 1053 1046 1043 1036 1033 1026 1019 996 945 899 *	898 875
	936 938 *	1016 1064 1062 1061 1055 1051 1046 1041 1037 1032 1024 1005 956 902 *	897 873
	872 903 *	1017 1054 1062 1059 1054 1049 1044 1039 1034 1030 1023 1008 972 *	896 866
		998 1063 1059 1058 1058 1048 1043 1038 1034 1029 1021 1003 958 909 *	899 889
	872 904 *	1020 1063 1059 1055 1050 1045 1040 1036 1031 1025 1012 978	
		998 1044 1055 1054 1049 1045 1040 1035 1030 1023 1005 961 910 *	901 892
	871 904 *	1010 1049 1054 1051 1047 1042 1037 1032 1026 1014 981	
		995 1039 1051 1049 1045 1041 1036 1032 1024 1007 962 910 *	902 894
	870 903 *	1014 1044 1049 1047 1042 1038 1033 1028 1015 992	
		962 1034 1045 1040 1036 1031 1024 1007 963 909 *	902 895
	869 901 *	1010 1030 1042 1039 1035 1031 1026 1015 992	
		996 1024 1022 1020 1027 1023 1018 1004 962 908 *	902 896
	866 899 *	1008 1021 1023 1021 1017 1013 1005 978	
		926 971 994 997 995 992 989 981 952 906 *	901 895
	862 894 *	967 975 975 974 971 967 954 *	
		910 917 910 910 917 917 915 911 905 *	
		895 *	887
		863 893 882 891 889 886	
	862	869 869 868 867 865 863 868	863

Temperature map for bundle 2A axial height	ASSEMBLY NO. 1405	MFA-1	
695	989 912 915 916 916 916	938	
931	941 945 947 947 946 946	955	
	957 973 977 977 976 975	976 988	
912 940	1018 1026 1029 1029 1028 1024 1013		
	957 1000 1042 1050 1051 1045 1042 1017 987	974 952	
914 942	1041 1075 1095 1087 1005 1004 1075 1046		
	978 1024 1074 1084 1098 1098 1093 1077 1034 992	979 966	
915 945	1051 1095 1119 1113 1114 1113 1095 1095 1057		
	1030 1087 1110 1117 1118 1118 1117 1111 1069 1039 994	982 978	
918 948	1056 1082 1119 1123 1125 1123 1119 1103 1062		
919 950	1050 1105 1123 1120 1130 1130 1130 1129 1124 1107 1064		
	1035 1094 1120 1128 1131 1131 1131 1129 1121 1087 1043 994	984 974	
919 951	1059 1107 1125 1131 1134 1134 1134 1132 1124 1088 1041 992	984 975	
	1034 1095 1122 1131 1134 1135 1135 1132 1124 1088 1041 992		
972 978	1052 1085 1126 1133 1136 1137 1137 1130 1137 1136 1129 1109 1058		
	1065 1115 1134 1141 1143 1143 1144 1144 1142 1133 1187 1049 1002	971 939	
917 949	1020 1028 1087 1120 1132 1136 1137 1138 1139 1138 1137 1124 1092 1029 988		
933 955	1020 1068 1122 1134 1138 1139 1140 1141 1141 1140 1137 1125 1094 1031 937	955 935	
950 973	1054 1085 1136 1137 1140 1141 1142 1142 1142 1140 1134 1113 1063		
972 978	1030 1030 1119 1129 1130 1141 1143 1143 1144 1144 1142 1133 1187 1049 1002	971 939	
	1065 1115 1134 1141 1143 1144 1145 1145 1144 1139 1121 1074		
975 982	1045 1106 1132 1141 1144 1145 1146 1146 1145 1137 1112 1054 1004	973 941	
	1071 1119 1137 1143 1145 1147 1147 1146 1142 1125 1078		
977 985	1049 1109 1135 1143 1146 1147 1146 1147 1139 1115 1057 1004	974 942	
	1074 1121 1139 1145 1147 1147 1147 1143 1127 1080		
978 ~ 989	1052 1118 1124 1142 1144 1145 1145 1139 1115 1057 1003	974 943	
	1075 1128 1135 1146 1142 1142 1139 1121 1080		
970 980	1051 1103 1122 1120 1130 1130 1126 1100 1055 1002	973 944	
	1063 1103 1114 1118 1119 1118 1109 1073		
977 989	1000 1030 1000 1004 1005 1005 1075 1043 1002	973 944	
	1038 1053 1059 1062 1063 1061 1045		
989	997 1002 1006 1010 1012 1013 1010 1004		
	995 999 1002 1005 1006 1006 1004		
982	993 996 999 1000 1000 999 987	962	

temperature map for bundle 51
axial height 50.500 in

Temperature map for bundle 51	ASSEMBLY NO. 2596	NFA-2
axial height		
918	995 985 994 982 988 897 894	885
928	923 923 922 919 916 913 989	984
	937 948 941 939 936 932 926 923 922 *	
948 948 *	974 965 965 962 978 972 958	
	975 1088 1085 1083 1088 995 986 958 926 *	918 894
943 944 *	1002 1029 1033 1032 1028 1023 1013 983	
	989 1028 1042 1039 1035 1029 1011 968 926 *	911 896
	1012 1046 1054 1053 1048 1045 1039 1025 987	
946 940 *	995 1048 1056 1057 1054 1058 1045 1037 1015	980 924 *
	974 965 965 962 978 972 958	910 896
947 951 *	1016 1051 1061 1060 1055 1052 1047 1048 1024 985	
	999 1044 1060 1062 1059 1054 1058 1045 1035 1013	964 921 *
	1019 1054 1064 1063 1059 1054 1049 1044 1037 1028 981	
948 953 *	1081 1047 1063 1064 1061 1056 1051 1047 1041 1031 1008	968 918 *
	1028 1056 1066 1065 1060 1055 1051 1046 1041 1033 1016 976	
949 954 *	959 1008 1047 1055 1066 1063 1050 1053 1040 1043 1037 1027 1004	955 916 *
	1014 1055 1067 1067 1062 1057 1052 1047 1042 1037 1028 1009 960	
948 953 *	1064 1068 1064 1059 1054 1049 1044 1039 1033 1021 994	944 914 *
988 931 *	1064 1068 1064 1059 1054 1049 1044 1039 1033 1021 994	944 914 *
952	1064 1068 1064 1059 1054 1049 1044 1039 1033 1021 994	944 914 *
984 917 *	1064 1068 1064 1059 1054 1049 1044 1039 1033 1021 994	944 914 *
	1012 1063 1066 1065 1061 1055 1058 1045 1048 1035 1027 1009 969	
883 917 *	995 1054 1062 1064 1060 1055 1049 1044 1034 1024 1002 958 924 *	913 901
	1016 1053 1063 1061 1057 1052 1047 1042 1037 1029 1013 977	
883 917 *	996 1043 1059 1056 1055 1051 1046 1041 1035 1025 1005 961 925 *	915 904
	1015 1058 1055 1057 1053 1048 1043 1038 1031 1015 979	
882 916 *	994 1039 1054 1055 1051 1047 1042 1037 1028 1008 963 925 *	915 986
	1011 1045 1053 1052 1048 1043 1039 1032 1016 980	
880 915 *	991 1033 1047 1047 1044 1040 1035 1027 1007 953 924 *	916 987
	1007 1037 1044 1042 1039 1035 1029 1015 986	
877 912 *	946 985 1021 1032 1031 1028 1024 1018 1001 961 922 *	915 988
	996 1018 1022 1020 1017 1013 1003 974	
874 988 *	941 969 998 994 993 998 987 978 951 920 *	914 987
	966 974 975 973 971 966 953	
934	932 932 933 932 931 929 925 928 *	
899	986 986 986 985 984 982 898	988
863	888 888 878 878 876 874 871	888

Table E12A-1.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 12A-1

Temperature map for bundle 24		ASSEMBLY NO. 1405		MFA-1	
axial height 32.088 in		923		923	
		961	968 972 974 976 978 979 981	945 947	958
			* 990 1003 1006 1009 1010 1011 1012 1015 1018 *		968
			* 1013 1023 1029 1030 1030 1029 1025		
		942 970 *	987 1011 1027 1036 1040 1041 1039 1034 1028 1023 *	1005 907	
			1025 1045 1057 1062 1062 1059 1051 1039		
		943 970 *	1010 1045 1062 1070 1073 1071 1065 1054 1038 1026 *	1008 990	
			1033 1053 1060 1069 1091 1069 1082 1069 1049		
		944 972 *	939 1024 1055 1060 1063 1090 1090 1094 1064 1066 1043 1020 *	1010 992	
			1030 1071 1094 1106 1111 1111 1107 1097 1079 1053		
		944 973 *	1001 1027 1063 1090 1107 1114 1116 1114 1106 1095 1072 1045 1028 *	1011 994	
			1040 1076 1101 1115 1122 1123 1122 1117 1105 1083 1055		
		944 974 *	1003 1028 1065 1095 1113 1122 1126 1126 1123 1116 1100 1074 1044 1027 *	1011 995	
			1039 1076 1104 1120 1127 1130 1131 1128 1122 1108 1093 1053		
		944 974 *	1004 1026 1063 1095 1116 1127 1131 1133 1132 1128 1119 1100 1072 1041 1026 *	1011 996	
			1033 1070 1101 1120 1130 1134 1136 1137 1135 1130 1110 1095 1064		
		943 973 *	1003 1054 1009 1114 1120 1134 1136 1137 1135 1130 1110 1095 1064	1036 1025 *	1011 997
		963 982 *	1001		959 973
		950 1001 *	1004 1019 1055 1090 1116 1129 1136 1138 1139 1137 1132 1120 1097 1066 1038 1029 *	959 968	
			1035 1073 1104 1124 1134 1136 1146 1139 1136 1127 1110 1092 1069		
		1001 1005 *	1009 1030 1069 1102 1123 1134 1139 1141 1140 1137 1127 1106 1079 1047 1032 *	1002 978	
			1046 1064 1112 1129 1137 1140 1141 1139 1132 1117 1092 1068		
		1004 1009 *	1014 1038 1077 1107 1126 1136 1140 1140 1138 1130 1112 1085 1053 1034 *	1004 972	
			1053 1069 1115 1130 1137 1139 1139 1133 1120 1096 1065		
		1006 1013 *	1019 1043 1060 1100 1125 1133 1136 1134 1128 1113 1087 1055 1035 *	1005 973	
			1057 1050 1113 1126 1131 1132 1129 1117 1096 1066		
		1000 1016 *	1024 1046 1079 1103 1116 1122 1123 1119 1107 1095 1055 1036 *	1006 975	
			1057 1095 1104 1113 1117 1115 1108 1091 1065		
		1000 1010 *	1026 1045 1071 1080 1097 1101 1100 1093 1077 1053 1036 *	1006 975	
			1052 1072 1004 1090 1092 1060 1070 1059		
		1008 1018 *	1027 1040 1054 1064 1069 1071 1070 1063 1049 1037 *	1007 976	
			1041 1050 1056 1060 1061 1059 1051		
			* 1027 1029 1033 1036 1040 1043 1044	1043 1040 *	
			1021	1053 1036 1037 1037 1036	1018
		1015	1027 1020 1030 1031 1031 1030 1029		995

Table E12A-1.17. Composition of MFA-1 at EOC 12A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.4474E-06
			U-238	7.0573E-03	6.7063E-03
			Pu-239	0.0000E+00	2.6525E-04
			Pu-240	0.0000E+00	1.9530E-05
			FP	0.0000E+00	6.9474E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	6.8588E-06
			U-238	4.4499E-03	4.1889E-03
			Pu-239	1.7520E-03	1.2941E-03
			Pu-240	2.2340E-04	3.0520E-04
			Pu-241	1.9280E-05	2.6738E-05
			Pu-242	4.7430E-06	5.4830E-06
			Am-241	7.6680E-07	3.7805E-06
			FP	0.0000E+00	6.2765E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	6.1553E-06
			U-238	4.4499E-03	4.1238E-03
			Pu-239	1.7520E-03	1.1976E-03
			Pu-240	2.2340E-04	3.0496E-04
			Pu-241	1.9280E-05	2.6989E-05
			Pu-242	4.7430E-06	5.5062E-06
			Am-241	7.6680E-07	3.6667E-06
			FP	0.0000E+00	7.8967E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	5.7821E-06
			U-238	4.4499E-03	4.0899E-03
			Pu-239	1.7520E-03	1.1516E-03
			Pu-240	2.2340E-04	3.0928E-04
			Pu-241	1.9280E-05	2.8000E-05
			Pu-242	4.7430E-06	5.6196E-06
			Am-241	7.6680E-07	3.6580E-06
			FP	0.0000E+00	8.6475E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	5.9037E-06
			U-238	4.4499E-03	4.1010E-03
			Pu-239	1.7520E-03	1.1658E-03
			Pu-240	2.2340E-04	3.0735E-04
			Pu-241	1.9280E-05	2.7591E-05
			Pu-242	4.7430E-06	5.5728E-06
			Am-241	7.6680E-07	3.6544E-06
			FP	0.0000E+00	8.4132E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	6.5153E-06
			U-238	4.4499E-03	4.1556E-03
			Pu-239	1.7520E-03	1.2399E-03
			Pu-240	2.2340E-04	2.9878E-04
			Pu-241	1.9280E-05	2.5806E-05
			Pu-242	4.7430E-06	5.3841E-06
			Am-241	7.6680E-07	3.6558E-06
			FP	0.0000E+00	7.2320E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	7.4738E-06
			U-238	4.4499E-03	4.2354E-03
			Pu-239	1.7520E-03	1.3636E-03
			Pu-240	2.2340E-04	2.9122E-04
			Pu-241	1.9280E-05	2.4293E-05
			Pu-242	4.7430E-06	5.2575E-06
			Am-241	7.6680E-07	3.7340E-06
			FP	0.0000E+00	5.2805E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	1.0163E-05
			U-238	7.0573E-03	6.8182E-03
			Pu-239	0.0000E+00	1.9268E-04
			Pu-240	0.0000E+00	8.5020E-06
			FP	0.0000E+00	4.0515E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E12A-1.18. Composition of MFA-2 at EOC 12A-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.5390E-06
			U-238	7.0573E-03	6.7193E-03
			Pu-239	0.0000E+00	2.5694E-04
			Pu-240	0.0000E+00	1.8750E-05
			FP	0.0000E+00	6.5568E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	6.5163E-06
			U-238	4.4270E-03	4.1741E-03
			Pu-239	1.7483E-03	1.3023E-03
			Pu-240	2.2290E-04	3.0328E-04
			Pu-241	1.9040E-05	2.6354E-05
			Pu-242	4.7330E-06	5.4410E-06
			Am-241	7.5700E-07	3.7851E-06
			FP	0.0000E+00	6.0884E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	5.8373E-06
			U-238	4.4270E-03	4.1080E-03
			Pu-239	1.7483E-03	1.2046E-03
			Pu-240	2.2290E-04	3.0392E-04
			Pu-241	1.9040E-05	2.6747E-05
			Pu-242	4.7330E-06	5.4728E-06
			Am-241	7.5700E-07	3.6773E-06
			FP	0.0000E+00	7.7274E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	5.4758E-06
			U-238	4.4270E-03	4.0729E-03
			Pu-239	1.7483E-03	1.1571E-03
			Pu-240	2.2290E-04	3.0860E-04
			Pu-241	1.9040E-05	2.7825E-05
			Pu-242	4.7330E-06	5.5908E-06
			Am-241	7.5700E-07	3.6775E-06
			FP	0.0000E+00	8.4936E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	5.5810E-06
			U-238	4.4270E-03	4.0831E-03
			Pu-239	1.7483E-03	1.1703E-03
			Pu-240	2.2290E-04	3.0679E-04
			Pu-241	1.9040E-05	2.7442E-05
			Pu-242	4.7330E-06	5.5479E-06
			Am-241	7.5700E-07	3.6746E-06
			FP	0.0000E+00	8.2804E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	6.1422E-06
			U-238	4.4270E-03	4.1360E-03
			Pu-239	1.7483E-03	1.2423E-03
			Pu-240	2.2290E-04	2.9829E-04
			Pu-241	1.9040E-05	2.5666E-05
			Pu-242	4.7330E-06	5.3647E-06
			Am-241	7.5700E-07	3.6702E-06
			FP	0.0000E+00	7.1327E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	7.0145E-06
			U-238	4.4270E-03	4.2141E-03
			Pu-239	1.7483E-03	1.3622E-03
			Pu-240	2.2290E-04	2.9127E-04
			Pu-241	1.9040E-05	2.4255E-05
			Pu-242	4.7330E-06	5.2512E-06
			Am-241	7.5700E-07	3.7445E-06
			FP	0.0000E+00	5.2335E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	9.9976E-06
			U-238	7.0573E-03	6.8138E-03
			Pu-239	0.0000E+00	1.9569E-04
			Pu-240	0.0000E+00	9.3481E-06
			FP	0.0000E+00	4.1249E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.15 Cycle 12A-2

Table B12A-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at BOC 12A-2

CORE POS.	* * * * *	POWER IN	MEGAWATTS	* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
1405	1.158E-01	3.858E+00	6.757E-02	4.042E+00
1304	0.000E+00	6.885E+00	0.000E+00	6.885E+00
1406	1.165E-02	4.654E+00	8.364E-03	4.674E+00
1404	0.000E+00	6.099E+00	0.000E+00	6.099E+00
1508	0.000E+00	5.303E+00	0.000E+00	5.303E+00
1506	1.578E-02	3.894E+00	1.061E-02	3.920E+00
1507	7.069E-03	4.613E+00	5.912E-03	4.626E+00
2506	9.201E-02	3.054E+00	5.507E-02	3.201E+00
2404	0.000E+00	5.656E+00	0.000E+00	5.656E+00
2505	8.733E-03	4.100E+00	5.667E-03	4.114E+00
2405	1.720E-02	3.279E+00	1.154E-02	3.308E+00
2606	1.455E-02	3.107E+00	8.320E-03	3.130E+00
2607	6.407E-03	3.466E+00	5.120E-03	3.477E+00
2507	1.212E-02	3.251E+00	8.547E-03	3.271E+00

Table B12A-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at BOC 12A-2

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-1	1405	3.787E+15	2.535E+15
MFA-2	2506	2.955E+15	1.890E+15

Table B12A-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at BOC 12A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6854E-02	1.3475E-02	0.0000E+00
-92.78	5.7513E-02	2.6015E-02	0.0000E+00
-87.78	9.2067E-02	4.1658E-02	0.0000E+00
-82.78	1.3316E-01	6.2219E-02	0.0000E+00
-77.78	1.8368E-01	9.0027E-02	0.0000E+00
-72.15	2.4188E-01	1.2650E-01	0.0000E+00
-65.90	3.0211E-01	1.7431E-01	0.0000E+00
-60.35	3.6646E-01	2.4155E-01	1.4064E-01
-55.49	4.5018E-01	3.2821E-01	1.5948E-01
-50.62	5.4578E-01	4.3950E-01	1.8292E-01
-47.17	6.2057E-01	5.4190E-01	2.0489E-01
-43.58	6.9860E-01	6.5634E-01	7.7120E-01
-38.45	8.1388E-01	7.9823E-01	8.6446E-01
-33.32	9.2127E-01	9.1895E-01	9.6847E-01
-28.20	1.0147E+00	1.0179E+00	9.9510E-01
-23.07	1.0929E+00	1.0990E+00	1.0702E+00
-17.94	1.1541E+00	1.1612E+00	1.1291E+00
-12.82	1.1972E+00	1.2040E+00	1.1344E+00
-7.69	1.2229E+00	1.2295E+00	1.1583E+00
-2.56	1.2307E+00	1.2376E+00	1.1656E+00
2.56	1.2207E+00	1.2283E+00	1.1674E+00
7.69	1.1929E+00	1.2012E+00	1.1410E+00
12.82	1.1479E+00	1.1572E+00	1.0983E+00
17.94	1.0867E+00	1.0973E+00	1.0929E+00
23.07	1.0090E+00	1.0194E+00	1.0156E+00
28.20	9.1647E-01	9.2479E-01	9.2370E-01
33.32	8.1148E-01	8.1546E-01	8.8763E-01
38.45	6.9508E-01	6.8811E-01	7.6616E-01
43.58	5.7357E-01	5.4564E-01	6.5053E-01
47.17	4.9507E-01	4.4106E-01	1.3414E-01
50.62	4.2581E-01	3.5383E-01	1.1240E-01
55.49	3.4252E-01	2.6245E-01	9.0464E-02
60.35	2.6809E-01	1.8982E-01	7.2875E-02
64.98	2.1736E-01	1.4311E-01	0.0000E+00
69.39	1.8467E-01	1.1628E-01	0.0000E+00
76.46	1.3780E-01	8.0388E-02	0.0000E+00
86.80	8.8308E-02	4.7204E-02	0.0000E+00
98.14	5.0342E-02	2.5272E-02	0.0000E+00
110.00	2.1407E-02	1.1133E-02	0.0000E+00

Table B12A-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 12A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7894E-02	1.4419E-02	0.0000E+00
-92.78	5.9838E-02	2.7822E-02	0.0000E+00
-87.78	9.5870E-02	4.4486E-02	0.0000E+00
-82.78	1.3882E-01	6.6318E-02	0.0000E+00
-77.78	1.9181E-01	9.5726E-02	0.0000E+00
-72.15	2.5293E-01	1.3406E-01	0.0000E+00
-65.90	3.1482E-01	1.8343E-01	0.0000E+00
-60.35	3.7850E-01	2.5154E-01	1.4328E-01
-55.49	4.6158E-01	3.3834E-01	1.6088E-01
-50.62	5.5626E-01	4.4912E-01	1.8228E-01
-47.17	6.3058E-01	5.5141E-01	2.0233E-01
-43.58	7.0831E-01	6.6609E-01	7.8801E-01
-38.45	8.2243E-01	8.0681E-01	8.7693E-01
-33.32	9.2829E-01	9.2597E-01	9.7818E-01
-28.20	1.0200E+00	1.0232E+00	1.0015E+00
-23.07	1.0968E+00	1.1028E+00	1.0749E+00
-17.94	1.1565E+00	1.1636E+00	1.1324E+00
-12.82	1.1983E+00	1.2049E+00	1.1350E+00
-7.69	1.2225E+00	1.2291E+00	1.1575E+00
-2.56	1.2288E+00	1.2357E+00	1.1633E+00
2.56	1.2172E+00	1.2247E+00	1.1627E+00
7.69	1.1877E+00	1.1959E+00	1.1346E+00
12.82	1.1410E+00	1.1501E+00	1.0902E+00
17.94	1.0785E+00	1.0891E+00	1.0817E+00
23.07	1.0006E+00	1.0109E+00	1.0043E+00
28.20	9.0934E-01	9.1764E-01	9.1400E-01
33.32	8.0738E-01	8.1155E-01	8.7955E-01
38.45	6.9585E-01	6.8921E-01	7.6507E-01
43.58	5.8053E-01	5.5281E-01	6.6012E-01
47.17	5.0504E-01	4.4959E-01	1.3591E-01
50.62	4.3491E-01	3.5995E-01	1.1537E-01
55.49	3.4713E-01	2.6417E-01	9.3724E-02
60.35	2.6866E-01	1.8841E-01	7.5795E-02
64.98	2.1749E-01	1.4139E-01	0.0000E+00
69.39	1.8590E-01	1.1574E-01	0.0000E+00
76.46	1.4048E-01	8.1373E-02	0.0000E+00
86.80	9.0781E-02	4.8452E-02	0.0000E+00
98.14	5.1849E-02	2.6141E-02	0.0000E+00
110.00	2.2104E-02	1.1585E-02	0.0000E+00

Table B12A-2.5. Fission Power Distribution by Pin in MFA-1 at BOC 12A-2

CORE POSITION 1405

	0.952	0.954	0.955	0.955	0.954	0.952	0.950	0.946						
	0.959	0.961	0.963	0.963	0.963	0.962	0.960	0.957	0.953					
	0.965	0.968	0.970	0.971	0.971	0.971	0.970	0.967	0.964	0.960				
	0.970	0.973	0.976	0.978	0.979	0.979	0.978	0.977	0.974	0.971	0.967			
	0.975	0.978	0.982	0.984	0.986	0.987	0.987	0.986	0.984	0.981	0.978	0.974		
	0.978	0.983	0.986	0.990	0.992	0.993	0.994	0.994	0.993	0.991	0.988	0.985	0.981	
	0.981	0.986	0.990	0.994	0.997	0.999	1.000	1.001	1.001	1.000	0.998	0.995	0.992	0.989
0.984	0.989	0.994	0.998	1.001	1.004	1.006	1.007	1.008	1.007	1.006	1.005	1.002	0.999	0.996
	0.991	0.996	1.001	1.005	1.008	1.011	1.013	1.014	1.014	1.014	1.013	1.011	1.009	1.006
	0.998	1.003	1.008	1.011	1.015	1.017	1.019	1.020	1.021	1.020	1.019	1.018	1.016	
	1.005	1.010	1.014	1.018	1.021	1.023	1.025	1.026	1.027	1.027	1.026	1.025		
	1.011	1.016	1.020	1.024	1.027	1.029	1.031	1.032	1.033	1.033	1.032			
	1.017	1.022	1.026	1.029	1.032	1.035	1.036	1.038	1.038	1.039				
	1.023	1.028	1.031	1.035	1.038	1.040	1.042	1.043	1.044					
	1.029	1.033	1.037	1.040	1.043	1.045	1.047	1.048						

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Table B12A-2.6. Fission Power Distribution by Pin in MFA-2 at BOC 12A-2

CORE POSITION 2506

		1.056	1.045	1.034	1.022	1.009	0.995	0.981	0.966						
		1.061	1.050	1.039	1.027	1.015	1.001	0.987	0.973	0.958					
		1.066	1.055	1.044	1.032	1.020	1.007	0.993	0.979	0.964	0.949				
		1.071	1.060	1.049	1.037	1.025	1.012	0.999	0.984	0.970	0.955	0.939			
		1.076	1.065	1.054	1.042	1.030	1.017	1.004	0.990	0.975	0.960	0.945	0.929		
		1.081	1.070	1.059	1.047	1.035	1.022	1.009	0.995	0.981	0.966	0.951	0.935	0.919	
		1.086	1.075	1.063	1.052	1.039	1.027	1.013	1.000	0.986	0.971	0.956	0.941	0.925	0.910
1.091	1.080	1.068	1.056	1.044	1.031	1.018	1.004	0.990	0.976	0.961	0.946	0.931	0.915	0.900	
		1.084	1.072	1.060	1.048	1.035	1.022	1.009	0.995	0.981	0.966	0.951	0.936	0.921	0.905
		1.076	1.064	1.052	1.039	1.026	1.013	0.999	0.985	0.970	0.956	0.941	0.926	0.910	
		1.068	1.056	1.043	1.030	1.016	1.003	0.989	0.975	0.960	0.945	0.930	0.915		
		1.059	1.046	1.033	1.020	1.006	0.993	0.978	0.964	0.950	0.935	0.920			
		1.049	1.036	1.023	1.009	0.996	0.982	0.968	0.953	0.939	0.924				
		1.039	1.026	1.012	0.999	0.985	0.971	0.957	0.943	0.928					
		1.028	1.015	1.001	0.988	0.974	0.960	0.946	0.931						

Table B12A-2.7. Fast Flux Distribution by Pin in MFA-1 at BOC 12A-2

CORE POSITION 1404

0.936	0.940	0.942	0.945	0.947	0.948	0.950	0.950												
0.944	0.947	0.950	0.952	0.954	0.956	0.957	0.958	0.958											
0.951	0.954	0.957	0.959	0.961	0.963	0.964	0.965	0.966	0.966										
0.959	0.962	0.964	0.967	0.969	0.970	0.972	0.972	0.973	0.973	0.973									
0.966	0.969	0.972	0.974	0.976	0.978	0.979	0.980	0.980	0.980	0.980	0.980								
0.974	0.977	0.979	0.982	0.983	0.985	0.986	0.987	0.988	0.988	0.987	0.987	0.986							
0.981	0.984	0.987	0.989	0.991	0.993	0.994	0.995	0.995	0.995	0.995	0.994	0.993	0.992						
0.989	0.992	0.995	0.997	0.999	1.000	1.001	1.002	1.003	1.003	1.002	1.002	1.001	0.999	0.997					
1.000	1.002	1.005	1.007	1.008	1.009	1.010	1.010	1.010	1.010	1.009	1.008	1.006	1.004						
1.010	1.013	1.015	1.016	1.017	1.018	1.018	1.018	1.018	1.017	1.016	1.014	1.012							
1.020	1.022	1.024	1.025	1.026	1.026	1.026	1.026	1.025	1.024	1.022	1.020								
1.030	1.032	1.033	1.034	1.035	1.034	1.034	1.033	1.032	1.030	1.028									
1.040	1.041	1.042	1.043	1.043	1.042	1.041	1.040	1.038	1.036										
1.049	1.050	1.051	1.051	1.051	1.050	1.048	1.047	1.044											
1.057	1.058	1.059	1.059	1.058	1.057	1.055	1.053												

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Table B12A-2.8. Fast Flux Distribution by Pin in MFA-2 at BOC 12A-2

CORE POSITION 2506

[illegible]

Table B12A-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at BOC 12A-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.5897E+15	2.0273E+15
SE	2.3979E+15	2.1247E+15
SW	2.3524E+15	1.9289E+15
W	2.4443E+15	1.6989E+15
NW	2.5833E+15	1.6656E+15
NE	2.6945E+15	1.8206E+15

Table B12A-2.10. Assembly Outlet Temperatures and
Flow Rates at BOC 12A-2

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE
	(DEG F)	(LB/H)
1405	1082	108830
1304	1065	190160
1404	1014	192500
1406	944	197060
1506	901	197060
1507	935	197060
1508	997	177390
2506	997	108830
2404	989	193800
2405	867	197080
2505	903	197060
2507	861	197060
2606	891	161600
2607	921	154980

Assembly flows are based on a calculated core pressure drop of 99.1 psi at a total reactor flow rate of 16.74E+06 lb/hr.

Table B12A-2.11. MFA-1 Sodium Subchannel Temperatures
at Top of Core Elevation for BOC 12A-2

1	temperature map for bundle 24	ASSEMBLY NO. 1405	MFA-1
	axial height	44.088 in	
859		328 324 326 327 326 325	931
923		943 947 948 948 946 945	948
		* 959 956 970 970 969 968 956 955 957 *	
		1022 1037 1040 1048 1030 1035 1022	
985 932 *		959 1028 1057 1064 1065 1065 1063 1056 1025 974 *	964 954
		1055 1089 1097 1099 1099 1096 1080 1059	
987 935 *		962 1035 1069 1105 1108 1108 1104 1090 1042 979 *	959 959
		1055 1106 1118 1120 1121 1120 1117 1106 1069	
989 938 *		1066 1040 1095 1118 1123 1124 1124 1123 1118 1086 981 *	971 962
		1069 1111 1125 1128 1129 1129 1120 1125 1112 1072	
910 940 *		969 1043 1102 1123 1129 1130 1131 1130 1129 1123 1104 1049 961 *	973 964
		1071 1114 1120 1132 1133 1133 1133 1132 1126 1115 1074 *	
911 941 *		971 1045 1105 1126 1132 1134 1134 1134 1132 1127 1106 1050 981 *	973 956
		1072 1116 1130 1135 1136 1137 1137 1136 1135 1131 1118 1075	
911 942 *		972 1044 1105 1128 1134 1136 1137 1138 1138 1137 1135 1129 1100 1040 979 *	973 957
		1056 1115 1131 1137 1138 1139 1140 1140 1140 1130 1134 1116 1070	
909 948 *		978 1031 1093 1127 1136 1139 1140 1141 1141 1140 1130 1103 1036 977 *	971 956
923 944 *		964	976 *
957 953 *		960 1031 1101 1129 1137 1140 1142 1143 1143 1142 1140 1132 1106 1039 993 *	954 924
		1067 1117 1135 1140 1142 1143 1144 1144 1144 1143 1130 1122 1075	
951 969 *		974 1040 1111 1134 1141 1143 1145 1145 1146 1144 1130 1117 1057 908 *	950 920
		1070 1124 1135 1143 1145 1146 1147 1147 1146 1143 1129 1085	
964 972 *		979 1054 1115 1137 1144 1146 1147 1148 1148 1147 1142 1121 1052 990 *	961 930
		1082 1127 1142 1146 1148 1149 1149 1149 1146 1132 1089	
966 975 *		984 1050 1116 1140 1146 1149 1150 1150 1145 1124 1064 991 *	962 932
		1086 1130 1144 1148 1149 1150 1150 1148 1135 1082	
957 -977 *		987 1060 1120 1141 1146 1148 1149 1149 1145 1125 1056 991 *	962 933
		1087 1129 1142 1145 1147 1147 1145 1134 1092	
957 970 *		909 1050 1115 1132 1136 1130 1136 1136 1120 1064 990 *	962 933
		1082 1116 1125 1127 1129 1120 1121 1087	
966 977 *		968 1047 1063 1068 1078 1071 1069 1054	961 933
		903 905 999 994 997 999 1000 997 969 *	
		976 *	978
		983 987 990 993 994 994 991 *	
970		982 985 987 988 989 988 985	950

Table B12A-2.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 12A-2

Temperature map for bundle 24	ASSEMBLY NO. 1405	MFA-1
axial height	912	933 937 939 941 941 941 941 946
	945	959 963 964 964 963 963 967
	977	984 988 988 988 986 985 984 987 *
		1828 1836 1848 1839 1838 1834 1822 *
	919 948 *	976 1018 1052 1061 1063 1062 1068 1051 1025 994 *
		981 968
	921 959 *	979 1023 1086 1105 1109 1118 1109 1104 1087 1042 999 *
		986 973
		1061 1105 1121 1124 1125 1124 1128 1128 1106 1065
	922 953 *	982 1039 1067 1121 1128 1130 1129 1128 1121 1059 1047 1081 *
		969 976
	924 955 *	986 1104 1129 1134 1135 1135 1134 1129 1113 1078
		1062 1104 1129 1137 1136 1137 1135 1127 1103 1049 1061 *
		999 978
	924 957 *	988 1115 1139 1148 1141 1140 1136 1134 1117 1079
		1004 1138 1139 1141 1142 1142 1141 1135 1131 1106 1059 1080 *
		999 980
	924 957 *	988 1117 1136 1142 1144 1144 1144 1142 1137 1119 1072
		1042 1184 1132 1141 1144 1146 1145 1145 1142 1133 1107 1048 998 *
		990 981
		1069 1114 1136 1144 1146 1147 1149 1149 1145 1139 1117 1065
	922 955 *	987 1026 1036 1130 1142 1146 1148 1148 1149 1149 1148 1144 1133 1100 1035 996 *
	938 968 *	992
	973 979 *	985
		1028 1067 1131 1144 1146 1149 1150 1151 1151 1150 1147 1135 1102 1038 1062 *
		971 948
		1062 1117 1140 1147 1150 1151 1152 1152 1151 1150 1143 1122 1070
	977 984 *	981 1045 1169 1139 1148 1151 1153 1153 1154 1153 1142 1115 1055 1080 *
		976 943
		1074 1124 1144 1150 1153 1154 1154 1153 1146 1130 1062
	988 988 *	997 1052 1115 1142 1151 1154 1155 1156 1156 1154 1146 1120 1061 1010 *
		978 945
		1079 1120 1147 1153 1155 1156 1157 1156 1151 1133 1086
	982 982 *	1082 1130 1149 1154 1156 1157 1157 1153 1136 1080
		1156 1149 1123 1064 1010 *
		979 947
	983 995 *	1005 1068 1119 1143 1151 1154 1155 1154 1148 1124 1065 1010 *
		979 948
		1083 1129 1145 1149 1151 1151 1148 1134 1088
	984 956 *	1008 1059 1111 1131 1137 1139 1139 1135 1116 1062 1069 *
		979 948
		1077 1112 1123 1127 1128 1127 1117 1081
		1045 1078 1088 1092 1094 1083 1084 1050 1088 *
	983 995 *	1005
		1045 1061 1067 1070 1071 1068 1053
		1003 1004 1008 1013 1016 1019 1020 1017 1010 *
		985
		1081 1005 1009 1011 1012 1012 1010
	988	999 1002 1004 1006 1006 1005 1002
		957
		908

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Table B12A-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for BOC 12A-2

1 Temperature map for bundle 51 axial height	ASSEMBLY NO. 2586	MFA-2
941	925 925 924 922 921 918 916	984
946	940 940 938 936 933 931 929	922
	955 955 954 952 949 946 943 941 940	
964 961	968 972 972 978 966 960 952	925 987
	962 995 1001 1001 998 991 990 983	
966 964	962 979 997 1006 1010 1009 1003 994 979 959 944	927 989
	991 1011 1022 1025 1023 1017 1007 991 969	
969 968	967 995 1003 1024 1031 1030 1026 1019 1006 995 960 944	927 911
	997 1020 1035 1040 1039 1035 1027 1015 995 969	
970 971	971 990 1015 1033 1042 1043 1040 1034 1025 1009 996 959 943	927 912
	1001 1025 1041 1040 1044 1044 1038 1036 1015 994 967	
972 974	975 993 1010 1030 1040 1050 1047 1043 1036 1025 1008 994 957 942	927 912
	1001 1026 1043 1051 1052 1049 1044 1037 1026 1012 990 963	
973 975	978 992 1017 1030 1050 1053 1051 1047 1041 1034 1022 1004 979 953 941	927 912
	995 1021 1042 1052 1054 1051 1047 1041 1034 1023 1006 992 957	
972 975	978 986 1009 1033 1049 1054 1053 1049 1044 1038 1023 1016 996 971 949 941	927 912
933 954	975 984 1009 1033 1048 1053 1052 1049 1043 1037 1029 1016 996 971 951 945	926 909
906 948	973 994 1020 1041 1051 1053 1050 1046 1040 1033 1022 1006 983 959	933 928
	968 1015 1037 1048 1051 1049 1045 1039 1032 1020 1003 988 957 948	935 922
994 938	972 969 1016 1035 1045 1046 1044 1039 1032 1022 1006 984 961 948	936 924
	998 1022 1038 1044 1043 1040 1034 1026 1012 993 969	
903 937	971 969 1013 1038 1038 1035 1030 1021 1006 985 962 948	937 926
	996 1018 1030 1035 1034 1030 1022 1011 992 978	
901 936	978 986 1007 1020 1025 1021 1014 1002 993 961 947	937 927
	991 1000 1017 1020 1018 1013 1003 988 968	
899 934	967 980 995 1003 1006 1004 1000 991 977 959 946	937 928
	962 992 987 998 995 989 978 963	
896 930	964 971 977 988 980 978 974 966 954 946	937 928
	960 971 972 971 969 964 956	
	959 957 956 956 955 954 952 949 946	
923	930 929 928 927 925 923 928	923
896	902 901 899 898 896 894 891	900

Table E12A-2.1. Fission Power Generated in MFA-1, MFA-2 and Neighboring Assemblies at EOC 12A-2

CORE POS.	***** BELOW CORE	POWER IN MEGAWATTS IN CORE	***** ABOVE CORE	***** TOTAL PWR
1405	1.164E-01	3.771E+00	7.276E-02	3.961E+00
1304	0.000E+00	6.704E+00	0.000E+00	6.704E+00
1406	1.215E-02	4.562E+00	9.199E-03	4.584E+00
1404	0.000E+00	5.982E+00	0.000E+00	5.982E+00
1508	0.000E+00	5.201E+00	0.000E+00	5.201E+00
1506	1.575E-02	3.829E+00	1.137E-02	3.856E+00
1507	7.424E-03	4.505E+00	6.495E-03	4.519E+00
2506	9.265E-02	3.029E+00	5.978E-02	3.182E+00
2404	0.000E+00	5.575E+00	0.000E+00	5.575E+00
2505	9.128E-03	4.118E+00	6.350E-03	4.134E+00
2405	1.725E-02	3.248E+00	1.241E-02	3.277E+00
2606	1.448E-02	3.120E+00	9.073E-03	3.143E+00
2607	6.633E-03	3.440E+00	5.628E-03	3.453E+00
2507	1.216E-02	3.219E+00	9.185E-03	3.241E+00

Table E12A-2.2. Assembly Averaged Total and Fast Flux in MFA-1 and MFA-2 at EOC 12A-2

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-1	1405	3.770E+15	2.511E+15
MFA-2	2506	2.973E+15	1.894E+15

Table E12A-2.3. Axial Distribution of Total Flux, Fast Flux and Power in MFA-1 at EOC 12A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.6206E-02	1.3195E-02	0.0000E+00
-92.78	5.6136E-02	2.5474E-02	0.0000E+00
-87.78	8.9866E-02	4.0786E-02	0.0000E+00
-82.78	1.2999E-01	6.0917E-02	0.0000E+00
-77.78	1.7931E-01	8.8129E-02	0.0000E+00
-72.15	2.3613E-01	1.2382E-01	0.0000E+00
-65.90	2.9484E-01	1.7060E-01	0.0000E+00
-60.35	3.5750E-01	2.3646E-01	1.4530E-01
-55.49	4.3907E-01	3.2104E-01	1.6430E-01
-50.62	5.3222E-01	4.2945E-01	1.8770E-01
-47.17	6.0507E-01	5.2911E-01	2.0932E-01
-43.58	6.8106E-01	6.4044E-01	7.5381E-01
-38.45	7.9382E-01	7.7909E-01	8.4538E-01
-33.32	8.9950E-01	8.9758E-01	9.4802E-01
-28.20	9.9215E-01	9.9550E-01	9.7169E-01
-23.07	1.0709E+00	1.0767E+00	1.0471E+00
-17.94	1.1338E+00	1.1406E+00	1.1077E+00
-12.82	1.1800E+00	1.1862E+00	1.1145E+00
-7.69	1.2100E+00	1.2161E+00	1.1423E+00
-2.56	1.2234E+00	1.2297E+00	1.1549E+00
2.56	1.2199E+00	1.2269E+00	1.1632E+00
7.69	1.1990E+00	1.2069E+00	1.1435E+00
12.82	1.1608E+00	1.1699E+00	1.1076E+00
17.94	1.1057E+00	1.1164E+00	1.1119E+00
23.07	1.0326E+00	1.0432E+00	1.0393E+00
28.20	9.4263E-01	9.5132E-01	9.5003E-01
33.32	8.3815E-01	8.4258E-01	9.2126E-01
38.45	7.2039E-01	7.1346E-01	7.9803E-01
43.58	5.9624E-01	5.6739E-01	6.7985E-01
47.17	5.1566E-01	4.5955E-01	1.4620E-01
50.62	4.4442E-01	3.6946E-01	1.2337E-01
55.49	3.5818E-01	2.7465E-01	1.0001E-01
60.35	2.8085E-01	1.9901E-01	8.1037E-02
64.98	2.2809E-01	1.5021E-01	0.0000E+00
69.39	1.9396E-01	1.2214E-01	0.0000E+00
76.46	1.4492E-01	8.4545E-02	0.0000E+00
86.80	9.2963E-02	4.9704E-02	0.0000E+00
98.14	5.3005E-02	2.6625E-02	0.0000E+00
110.00	2.2515E-02	1.1725E-02	0.0000E+00

Table E12A-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 12A-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7020E-02	1.4009E-02	0.0000E+00
-92.78	5.7972E-02	2.7032E-02	0.0000E+00
-87.78	9.2888E-02	4.3224E-02	0.0000E+00
-82.78	1.3452E-01	6.4443E-02	0.0000E+00
-77.78	1.8591E-01	9.3018E-02	0.0000E+00
-72.15	2.4519E-01	1.3029E-01	0.0000E+00
-65.90	3.0521E-01	1.7831E-01	0.0000E+00
-60.35	3.6693E-01	2.4468E-01	1.4592E-01
-55.49	4.4758E-01	3.2903E-01	1.6352E-01
-50.62	5.3951E-01	4.3654E-01	1.8472E-01
-47.17	6.1169E-01	5.3571E-01	2.0434E-01
-43.58	6.8721E-01	6.4687E-01	7.6568E-01
-38.45	7.9866E-01	7.8395E-01	8.5296E-01
-33.32	9.0271E-01	9.0078E-01	9.5275E-01
-28.20	9.9381E-01	9.9703E-01	9.7444E-01
-23.07	1.0712E+00	1.0770E+00	1.0485E+00
-17.94	1.1330E+00	1.1397E+00	1.1079E+00
-12.82	1.1783E+00	1.1845E+00	1.1131E+00
-7.69	1.2076E+00	1.2136E+00	1.1403E+00
-2.56	1.2203E+00	1.2266E+00	1.1522E+00
2.56	1.2163E+00	1.2233E+00	1.1592E+00
7.69	1.1950E+00	1.2029E+00	1.1392E+00
12.82	1.1567E+00	1.1657E+00	1.1030E+00
17.94	1.1017E+00	1.1124E+00	1.1051E+00
23.07	1.0291E+00	1.0396E+00	1.0331E+00
28.20	9.4036E-01	9.4898E-01	9.4534E-01
33.32	8.3824E-01	8.4270E-01	9.1655E-01
38.45	7.2440E-01	7.1762E-01	7.9942E-01
43.58	6.0547E-01	5.7674E-01	6.9117E-01
47.17	5.2730E-01	4.6959E-01	1.4750E-01
50.62	4.5453E-01	3.7643E-01	1.2590E-01
55.49	3.6316E-01	2.7662E-01	1.0282E-01
60.35	2.8132E-01	1.9747E-01	8.3502E-02
64.98	2.2797E-01	1.4824E-01	0.0000E+00
69.39	1.9494E-01	1.2137E-01	0.0000E+00
76.46	1.4737E-01	8.5361E-02	0.0000E+00
86.80	9.5231E-02	5.0828E-02	0.0000E+00
98.14	5.4345E-02	2.7409E-02	0.0000E+00
110.00	2.3109E-02	1.2123E-02	0.0000E+00

Table E12A-2.5. Fission Power Distribution by Pin in MFA-1 at EOC 12A-2

CORE POSITION 1405

	0.952	0.954	0.954	0.954	0.954	0.952	0.949	0.945						
	0.959	0.961	0.962	0.963	0.963	0.961	0.959	0.956	0.953					
	0.965	0.968	0.970	0.971	0.971	0.970	0.969	0.967	0.964	0.960				
	0.970	0.974	0.976	0.978	0.979	0.979	0.978	0.976	0.974	0.971	0.967			
	0.975	0.979	0.982	0.984	0.986	0.986	0.986	0.985	0.984	0.981	0.978	0.974		
	0.979	0.983	0.987	0.990	0.992	0.993	0.994	0.993	0.992	0.991	0.988	0.985	0.982	
	0.982	0.987	0.991	0.994	0.997	0.999	1.000	1.001	1.000	0.999	0.998	0.995	0.992	0.989
0.985	0.990	0.994	0.998	1.001	1.004	1.006	1.007	1.007	1.007	1.006	1.005	1.002	1.000	0.996
	0.992	0.997	1.001	1.005	1.008	1.011	1.012	1.014	1.014	1.014	1.013	1.011	1.009	1.007
	0.999	1.004	1.008	1.012	1.015	1.017	1.019	1.020	1.020	1.020	1.020	1.018	1.016	
	1.006	1.010	1.014	1.018	1.021	1.023	1.025	1.026	1.027	1.027	1.026	1.025		
	1.012	1.016	1.020	1.024	1.027	1.029	1.031	1.032	1.033	1.033	1.033			
	1.018	1.022	1.026	1.029	1.032	1.034	1.036	1.038	1.038	1.038				
	1.024	1.028	1.031	1.035	1.037	1.040	1.042	1.043	1.043					
	1.029	1.033	1.037	1.040	1.043	1.045	1.047	1.048						

Table E12A-2.6. Fission Power Distribution by Pin in MFA-2 at EOC 12A-2

CORE POSITION 2506

[illegible]

Table E12A-2.7. Fast Flux Distribution by Pin in MFA-1 at EOC 12A-2

CORE POSITION 1404

0.936	0.939	0.942	0.944	0.946	0.948	0.949	0.950												
0.944	0.947	0.949	0.952	0.954	0.955	0.957	0.958	0.958											
0.951	0.954	0.957	0.959	0.961	0.963	0.964	0.965	0.965	0.966										
0.959	0.962	0.964	0.967	0.968	0.970	0.971	0.972	0.973	0.973	0.973									
0.967	0.969	0.972	0.974	0.976	0.977	0.978	0.979	0.980	0.980	0.980	0.980								
0.974	0.977	0.980	0.982	0.983	0.985	0.986	0.987	0.987	0.987	0.987	0.987	0.987	0.987	0.986					
0.982	0.985	0.987	0.989	0.991	0.992	0.994	0.994	0.995	0.995	0.995	0.994	0.993	0.992						
0.990	0.993	0.995	0.997	0.999	1.000	1.001	1.002	1.002	1.002	1.002	1.002	1.001	0.999	0.997					
1.001	1.003	1.005	1.007	1.008	1.009	1.010	1.010	1.010	1.010	1.009	1.008	1.007	1.005						
1.011	1.013	1.015	1.016	1.017	1.018	1.018	1.018	1.018	1.017	1.016	1.014	1.012							
1.021	1.023	1.024	1.025	1.026	1.026	1.026	1.026	1.025	1.024	1.022	1.020								
1.031	1.032	1.033	1.034	1.034	1.034	1.034	1.033	1.032	1.030	1.028									
1.040	1.041	1.042	1.043	1.043	1.042	1.041	1.040	1.038	1.036										
1.049	1.050	1.051	1.051	1.050	1.049	1.048	1.046	1.044											
1.058	1.059	1.059	1.058	1.058	1.056	1.055	1.052												

Table E12A-2.8. Fast Flux Distribution by Pin in MFA-2 at EOC 12A-2

CORE POSITION 2506

	1.087	1.070	1.052	1.034	1.016	0.998	0.980	0.961						
	1.093	1.076	1.058	1.041	1.023	1.005	0.987	0.969	0.950					
	1.098	1.081	1.064	1.047	1.029	1.012	0.994	0.976	0.958	0.940				
	1.102	1.086	1.069	1.052	1.035	1.018	1.000	0.983	0.965	0.947	0.929			
	1.105	1.089	1.073	1.056	1.040	1.023	1.006	0.989	0.971	0.954	0.936	0.917		
	1.108	1.092	1.076	1.060	1.044	1.028	1.011	0.994	0.977	0.960	0.942	0.924	0.906	
	1.109	1.094	1.079	1.063	1.048	1.032	1.015	0.999	0.982	0.965	0.948	0.931	0.913	0.895
1.110	1.096	1.081	1.066	1.051	1.035	1.019	1.003	0.987	0.970	0.954	0.937	0.919	0.901	0.883
	1.096	1.082	1.068	1.053	1.038	1.022	1.007	0.991	0.975	0.959	0.942	0.925	0.908	0.890
	1.083	1.069	1.054	1.040	1.025	1.010	0.995	0.979	0.963	0.947	0.930	0.913	0.896	
	1.069	1.055	1.042	1.027	1.013	0.998	0.983	0.967	0.951	0.935	0.918	0.901		
	1.056	1.042	1.029	1.015	1.000	0.985	0.970	0.955	0.939	0.923	0.906			
	1.043	1.030	1.016	1.002	0.988	0.973	0.958	0.943	0.927	0.911				
	1.030	1.017	1.004	0.990	0.975	0.961	0.946	0.930	0.914					
	1.017	1.004	0.991	0.977	0.963	0.948	0.933	0.918						

Table E12A-2.9. MFA-1 and MFA-2 Duct Wall
Fast Flux Data at EOC 12A-2

Side	Flux > 0.1 MeV (n/cm ² -sec)	
	MFA-1	MFA-2
E	2.5690E+15	2.0264E+15
SE	2.3779E+15	2.1271E+15
SW	2.3292E+15	1.9413E+15
W	2.4225E+15	1.7091E+15
NW	2.5606E+15	1.6690E+15
NE	2.6691E+15	1.8208E+15

Table E12A-2.10. Assembly Outlet Temperatures and
Flow Rates at EOC 12A-2

CORE POS.	CALCULATED OUTLET TEMP.	FLOW RATE (LB/H)
	(DEG F)	
1405	1069	108830
1304	1051	190160
1404	1005	192500
1406	937	197060
1506	895	197060
1507	926	197060
1508	988	177390
2506	993	108830
2404	983	193800
2405	864	197080
2505	906	197060
2507	858	197060
2606	892	161600
2607	918	154980

Assembly flows are based on a calculated core pressure drop of 99.1 psi at a total reactor flow rate of 16.74E+06 lb/hr.

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Table E12A-2.13. MFA-1 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for EOC 12A-2

temperature map for bundle 24 axial height 58.588 in	ASSEMBLY NO. 1405	MFA-1
905	925 928 931 932 932 932 932 938	
	937	958 954 955 955 954 954 958
		958 974 970 976 976 975 975 978
		1009 1025 1028 1028 1025 1023 1011
911 940	967 1007 1040 1049 1059 1058 1047 1039 1014 964	972 933
	1039 1073 1082 1084 1084 1081 1072 1043	
913 942	969 1022 1073 1091 1095 1096 1095 1080 1074 1030 969	976 963
	1049 1092 1106 1110 1110 1110 1086 1092 1054	
915 944	973 1027 1084 1107 1114 1115 1115 1113 1107 1085 1036 991	979 967
	1053 1098 1115 1120 1121 1121 1126 1115 1099 1058	
916 946	976 1031 1080 1119 1121 1123 1122 1120 1113 1080 1030 991	980 969
	1055 1101 1119 1124 1126 1126 1126 1124 1119 1103 1069	
917 948	970 1032 1088 1116 1124 1126 1127 1127 1127 1124 1117 1033 1030 990	901 971
	1056 1103 1121 1127 1129 1129 1130 1128 1128 1122 1105 1060	
917 949	980 1031 1091 1117 1126 1129 1130 1131 1131 1130 1127 1119 1093 1036 980	900 971
	1048 1101 1122 1129 1131 1132 1133 1133 1132 1131 1124 1104 1054	
915 947	970 1017 1063 1116 1120 1131 1133 1133	954 971
930 952	973	954 971
964 970	975	965 942
	1050 1103 1125 1132 1135 1135 1136 1137 1137 1136 1135 1129 1108 1058	965 932
968 975	981 1034 1095 1124 1133 1135 1139 1138 1139 1138 1136 1120 1102 1044 997	967 935
	1061 1110 1129 1136 1130 1139 1139 1139 1139 1133 1116 1069	
971 979	987 1041 1101 1127 1136 1139 1140 1141 1141 1139 1132 1107 1050 999	969 937
	1067 1114 1132 1130 1140 1141 1142 1141 1136 1119 1073	
973 982	992 1045 1104 1130 1139 1141 1142 1142 1141 1134 1109 1052 1000	970 938
	1076 1116 1134 1139 1141 1142 1142 1142 1138 1121 1075	
974 985	995 1048 1105 1129 1136 1139 1140 1140 1139 1133 1110 1053 999	970 939
	1071 1115 1130 1135 1136 1136 1134 1119 1075	
974 986	997 1047 1098 1117 1122 1124 1124 1121 1102 1050 998	969 948
	1064 1099 1109 1112 1114 1113 1104 1066	
973 985	996 1034 1065 1075 1079 1080 1080 1071 1038 997	969 948
	1033 1049 1055 1057 1059 1055 1041	
	992 994 998 1002 1006 1006 1009 1006 1000	
985	991 995 996 1000 1001 1001 999	979
977	980 991 993 994 994 991	957

[illegible]389

Table E12A-2.15. MFA-1 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 12A-2

Temperature map for bundle 24 axial height 92.000 in	ASSEMBLY NO. 1485	MFA-1
533	949 953 955 956 960 962 963	956
967	977 981 983 985 986 987 988	991
1000 1005 1009 1010 1011 1012 1013 1015		
942 971	999 1012 1027 1036 1039 1040 1037 1032 1025 1019	1002 985
942 971	1024 1044 1056 1060 1057 1049 1036	
943 973	1001 1026 1060 1067 1103 1110 1112 1111 1084 1091 1068 1041 1023	1005 987
943 972	1032 1060 1077 1096 1080 1095 1079 1065 1045	
943 972	1000 1023 1054 1070 1090 1095 1091 1080 1062 1039 1023	1007 989
943 973	1037 1069 1091 1103 1107 1107 1103 1093 1075 1049	
943 973	1036 1073 1090 1112 1110 1119 1118 1113 1100 1079 1059	
943 973	1003 1026 1062 1091 1110 1118 1122 1122 1119 1111 1095 1070 1040 1022	1007 992
942 973	1037 1073 1100 1116 1123 1126 1126 1124 1117 1103 1079 1040	
942 973	1003 1023 1060 1091 1112 1122 1127 1128 1127 1123 1114 1096 1068 1037 1021	1007 993
941 972	1030 1066 1097 1116 1126 1130 1131 1130 1127 1110 1101 1074 1043	1007 993
950 980	1050 1085 1110 1123 1129 1132 1132 1130 1125 1113 1098 1069 1031 1020	1007 993
955 990	1002 1016 1051 1066 1111 1125 1131 1133 1134 1132 1127 1115 1092 1061 1033 1024	1007 993
997 1002	1032 1069 1100 1119 1129 1133 1135 1134 1131 1122 1105 1077 1046	1007 994
1000 1005	1007 1027 1065 1097 1110 1129 1134 1136 1135 1131 1122 1102 1074 1042 1020	997 965
1002 1009	1043 1060 1100 1124 1132 1135 1136 1134 1127 1112 1107 1055	
1003 1012	1011 1035 1073 1103 1121 1131 1134 1135 1132 1124 1107 1009 1040 1030	999 960
1004 1013	1050 1085 1111 1125 1132 1134 1133 1128 1114 1091 1060	
1004 1014	1016 1040 1076 1103 1120 1120 1130 1129 1122 1107 1062 1050 1031	1000 969
1004 1014	1053 1086 1109 1121 1126 1127 1123 1112 1091 1061	
1004 1014	1020 1042 1074 1098 1111 1117 1110 1114 1102 1090 1050 1031	1001 970
1004 1013	1053 1081 1099 1100 1112 1110 1105 1066 1066	
1004 1013	1041 1066 1083 1092 1096 1095 1080 1072 1040 1032	1002 971
1004 1013	1040 1067 1079 1095 1087 1063 1073 1055	
1004 1014	1024 1036 1059 1059 1064 1065 1065 1050 1044 1032	1003 972
1004 1014	1037 1046 1052 1055 1056 1054 1046	
1004 1014	1023 1025 1026 1032 1036 1030 1039 1030 1035	
1004 1014	1017 1023 1026 1020 1030 1032 1032 1031	1013
1004 1014	1021 1023 1024 1025 1025 1025 1023	990

Table E12A-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 12A-2

Temperature map for bundle 51 axial height 32.688 in	ASSEMBLY NO. 2586	MFA-2
939	925 924 923 921 919 917 915	984
946	939 939 937 935 932 938 927	921
953 953 951 948 945 942 939 939 *	953 953 951 948 945 942 939 939 *	
958 958 *	956 978 971 968 964 958 951	924 987
952 961 *	980 993 999 999 996 989 978 961	
964 964 *	989 1008 1019 1023 1021 1015 1005 989 966	
966 967 *	994 1017 1031 1037 1036 1032 1025 1012 993 966	
967 970 *	997 1022 1039 1047 1048 1045 1040 1034 1025 1018 968	
960 971 *	992 1017 1037 1048 1058 1047 1043 1038 1031 1028 1003 988 955	
969 971 *	982 1005 1020 1043 1049 1048 1044 1039 1034 1025 1012 993 968 946 939 *	925 911
929 951 *	987 1004 1013 1015 1013 1008 999 984 964	924 918
983 937 *	984 1016 1036 1046 1046 1042 1035 1028 1019 1003 988 956	938 917
982 936 *	984 1018 1033 1039 1035 1030 1022 1009 988 966	
981 935 *	984 1019 1037 1044 1047 1045 1040 1035 1028 1017 1008 977 954 944 *	932 919
980 934 *	982 1013 1025 1030 1029 1025 1018 1006 989 966	
898 932 *	987 1004 1013 1015 1013 1008 999 984 964	
896 930 *	978 988 993 993 990 985 974 959	
893 927 *	964 967 973 976 974 970 962 951 942 *	933 925
955 953 952 951 950 948 945 942 *	955 953 952 951 950 948 945 942 *	
919	926 925 924 923 922 928 917	928
883	888 897 896 895 893 898 888	897

Table E12A-2.17. Composition of MFA-1 at EOC 12A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.1637E-06
			U-238	7.0573E-03	6.6838E-03
			Pu-239	0.0000E+00	2.7816E-04
			Pu-240	0.0000E+00	2.1864E-05
			FP	0.0000E+00	7.6754E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0840E-05	6.6573E-06
			U-238	4.4499E-03	4.1725E-03
			Pu-239	1.7520E-03	1.2697E-03
			Pu-240	2.2340E-04	3.0840E-04
			Pu-241	1.9280E-05	2.7272E-05
			Pu-242	4.7430E-06	5.5399E-06
			Am-241	7.6680E-07	3.8950E-06
			FP	0.0000E+00	6.6464E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0840E-05	5.9310E-06
			U-238	4.4499E-03	4.1033E-03
			Pu-239	1.7520E-03	1.1696E-03
			Pu-240	2.2340E-04	3.0755E-04
			Pu-241	1.9280E-05	2.7508E-05
			Pu-242	4.7430E-06	5.5653E-06
			Am-241	7.6680E-07	3.7663E-06
			FP	0.0000E+00	8.3495E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0840E-05	5.5473E-06
			U-238	4.4499E-03	4.0673E-03
			Pu-239	1.7520E-03	1.1221E-03
			Pu-240	2.2340E-04	3.1177E-04
			Pu-241	1.9280E-05	2.8567E-05
			Pu-242	4.7430E-06	5.6895E-06
			Am-241	7.6680E-07	3.7536E-06
			FP	0.0000E+00	9.1372E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0840E-05	5.6701E-06
			U-238	4.4499E-03	4.0789E-03
			Pu-239	1.7520E-03	1.1365E-03
			Pu-240	2.2340E-04	3.0987E-04
			Pu-241	1.9280E-05	2.8145E-05
			Pu-242	4.7430E-06	5.6389E-06
			Am-241	7.6680E-07	3.7500E-06
			FP	0.0000E+00	8.8956E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0840E-05	6.2970E-06
			U-238	4.4499E-03	4.1366E-03
			Pu-239	1.7520E-03	1.2127E-03
			Pu-240	2.2340E-04	3.0141E-04
			Pu-241	1.9280E-05	2.6279E-05
			Pu-242	4.7430E-06	5.4333E-06
			Am-241	7.6680E-07	3.7553E-06
			FP	0.0000E+00	7.6619E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0840E-05	7.2900E-06
			U-238	4.4499E-03	4.2214E-03
			Pu-239	1.7520E-03	1.3414E-03
			Pu-240	2.2340E-04	2.9417E-04
			Pu-241	1.9280E-05	2.4700E-05
			Pu-242	4.7430E-06	5.2954E-06
			Am-241	7.6680E-07	3.8456E-06
			FP	0.0000E+00	5.6080E-04
			O-16	1.2670E-02	1.2670E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	9.9361E-06
			U-238	7.0573E-03	6.8022E-03
			Pu-239	0.0000E+00	2.0347E-04
			Pu-240	0.0000E+00	9.5987E-06
			FP	0.0000E+00	4.4760E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Table E12A-2.18. Composition of MFA-2 at EOC 12A-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.2937E-06
			U-238	7.0573E-03	6.7003E-03
			Pu-239	0.0000E+00	2.6816E-04
			Pu-240	0.0000E+00	2.0721E-05
			FP	0.0000E+00	7.1396E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	6.3545E-06
			U-238	4.4270E-03	4.1603E-03
			Pu-239	1.7483E-03	1.2822E-03
			Pu-240	2.2290E-04	3.0651E-04
			Pu-241	1.9040E-05	2.6856E-05
			Pu-242	4.7330E-06	5.4941E-06
			Am-241	7.5700E-07	3.9100E-06
			FP	0.0000E+00	6.3884E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	5.6586E-06
			U-238	4.4270E-03	4.0909E-03
			Pu-239	1.7483E-03	1.1819E-03
			Pu-240	2.2290E-04	3.0675E-04
			Pu-241	1.9040E-05	2.7253E-05
			Pu-242	4.7330E-06	5.5299E-06
			Am-241	7.5700E-07	3.7916E-06
			FP	0.0000E+00	8.0910E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	5.2897E-06
			U-238	4.4270E-03	4.0541E-03
			Pu-239	1.7483E-03	1.1333E-03
			Pu-240	2.2290E-04	3.1137E-04
			Pu-241	1.9040E-05	2.8380E-05
			Pu-242	4.7330E-06	5.6581E-06
			Am-241	7.5700E-07	3.7902E-06
			FP	0.0000E+00	8.8849E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	5.3970E-06
			U-238	4.4270E-03	4.0648E-03
			Pu-239	1.7483E-03	1.1468E-03
			Pu-240	2.2290E-04	3.0956E-04
			Pu-241	1.9040E-05	2.7978E-05
			Pu-242	4.7330E-06	5.6115E-06
			Am-241	7.5700E-07	3.7874E-06
			FP	0.0000E+00	8.6640E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	5.9714E-06
			U-238	4.4270E-03	4.1204E-03
			Pu-239	1.7483E-03	1.2206E-03
			Pu-240	2.2290E-04	3.0105E-04
			Pu-241	1.9040E-05	2.6114E-05
			Pu-242	4.7330E-06	5.4123E-06
			Am-241	7.5700E-07	3.7846E-06
			FP	0.0000E+00	7.4728E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	6.8697E-06
			U-238	4.4270E-03	4.2025E-03
			Pu-239	1.7483E-03	1.3442E-03
			Pu-240	2.2290E-04	2.9417E-04
			Pu-241	1.9040E-05	2.4632E-05
			Pu-242	4.7330E-06	5.2878E-06
			Am-241	7.5700E-07	3.8671E-06
			FP	0.0000E+00	5.4953E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	9.8017E-06
			U-238	7.0573E-03	6.8001E-03
			Pu-239	0.0000E+00	2.0495E-04
			Pu-240	0.0000E+00	1.0357E-05
			FP	0.0000E+00	4.4734E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.16 Cycle 12B-1

Table B12B-1.1. Fission Power Generated in MFA-2 and Neighboring Assemblies at BOC 12B-1

CORE POS.	***** BELOW CORE	POWER IN MEGAWATTS			***** TOTAL PWR
		IN CORE	ABOVE CORE		
2405	1.119E-01	3.575E+00	6.707E-02		3.754E+00
2304	1.295E-02	4.818E+00	9.428E-03		4.840E+00
2404	0.000E+00	5.813E+00	0.000E+00		5.813E+00
2406	0.000E+00	0.000E+00	0.000E+00		0.000E+00
2506	1.244E-02	3.806E+00	8.897E-03		3.827E+00
2507	1.495E-02	3.300E+00	9.297E-03		3.324E+00
2508	1.367E-02	3.618E+00	8.929E-03		3.640E+00

Table B12B-1.2. Assembly Averaged Total and Fast Flux in MFA-2 at BOC 12B-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-2	2405	3.501E+15	2.216E+15

Table B12B-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 12B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7884E-02	1.4681E-02	0.0000E+00
-92.78	5.9935E-02	2.8414E-02	0.0000E+00
-87.78	9.6193E-02	4.5549E-02	0.0000E+00
-82.78	1.3954E-01	6.8072E-02	0.0000E+00
-77.78	1.9313E-01	9.8491E-02	0.0000E+00
-72.15	2.5475E-01	1.3807E-01	0.0000E+00
-65.90	3.1734E-01	1.8881E-01	0.0000E+00
-60.35	3.8231E-01	2.5830E-01	1.4928E-01
-55.49	4.6508E-01	3.4517E-01	1.6742E-01
-50.62	5.5874E-01	4.5451E-01	1.8922E-01
-47.17	6.3169E-01	5.5398E-01	2.0905E-01
-43.58	7.0772E-01	6.6539E-01	7.9087E-01
-38.45	8.1962E-01	8.0315E-01	8.7765E-01
-33.32	9.2389E-01	9.2084E-01	9.7639E-01
-28.20	1.0147E+00	1.0175E+00	9.9520E-01
-23.07	1.0909E+00	1.0968E+00	1.0676E+00
-17.94	1.1506E+00	1.1578E+00	1.1247E+00
-12.82	1.1927E+00	1.1996E+00	1.1262E+00
-7.69	1.2175E+00	1.2245E+00	1.1492E+00
-2.56	1.2249E+00	1.2322E+00	1.1560E+00
2.56	1.2148E+00	1.2228E+00	1.1573E+00
7.69	1.1871E+00	1.1958E+00	1.1311E+00
12.82	1.1426E+00	1.1522E+00	1.0890E+00
17.94	1.0825E+00	1.0933E+00	1.0854E+00
23.07	1.0065E+00	1.0169E+00	1.0101E+00
28.20	9.1661E-01	9.2472E-01	9.2147E-01
33.32	8.1536E-01	8.1915E-01	8.9221E-01
38.45	7.0394E-01	6.9686E-01	7.7798E-01
43.58	5.8804E-01	5.6053E-01	6.7146E-01
47.17	5.1114E-01	4.5728E-01	1.4130E-01
50.62	4.3968E-01	3.6757E-01	1.2023E-01
55.49	3.5033E-01	2.7072E-01	9.7558E-02
60.35	2.7060E-01	1.9348E-01	7.8653E-02
64.98	2.1808E-01	1.4491E-01	0.0000E+00
69.39	1.8529E-01	1.1802E-01	0.0000E+00
76.46	1.3865E-01	8.2205E-02	0.0000E+00
86.80	8.9135E-02	4.8661E-02	0.0000E+00
98.14	5.0879E-02	2.6186E-02	0.0000E+00
110.00	2.1560E-02	1.1534E-02	0.0000E+00

Table B12B-1.6. Fission Power Distribution by Pin in MFA-2 at BOC 12B-1

CORE POSITION 2405

[illegible]

Table B12B-1.8. Fast Flux Distribution by Pin in MFA-2 at BOC 12B-1

CORE POSITION 2405

[illegible]

Table B12B-1.9. MFA-2 Duct Wall
Fast Flux Data at BOC 12B-1

Side	Flux > 0.1 MeV (n/cm ² -sec)
	MFA-2
E	2.1676E+15
SE	2.3772E+15
SW	2.3653E+15
W	2.1638E+15
NW	2.0292E+15
NE	2.0600E+15

Table B12B-1.10. Assembly Outlet Temperatures and
Flow Rates at BOC 12B-1

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
2405	1042	109980
2304	942	199130
2404	995	195840
2406	845	14020
2506	903	189360
2507	874	189360
2508	889	189360

Assembly flows are based on a calculated core pressure drop of 101.2 psi at a total reactor flow rate of 16.74E+06 lb/hr.

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Table B12B-1.14. MFA-2 Sodium Subchannel Temperatures
at Elevation of Upper Axial Blanket for BOC 12B-1

temperature map for bundle axial height	30 50.508 in	ASSEMBLY NO. 2485	MFA-2
941	970 978 976 977 975 972 969 984 959	970 978 960 966 953 959	929
968	976 977 975 972 969 984 959	976 977 975 972 969 984 959	943
977 982 983 981 976 971 966 960 957	977 982 983 981 976 971 966 960 957	977 982 983 981 976 971 966 960 957	
926 952	977 1017 1047 1053 1050 1046 1041 1029 998 961	977 1017 1047 1053 1050 1046 1041 1029 998 961	937 913
928 954	979 1031 1079 1094 1092 1079 1073 1061 1027	979 1031 1079 1094 1092 1079 1073 1061 1027	
929 956	982 1035 1089 1108 1110 1108 1104 1099 1098 1065 1010 969	982 1035 1089 1108 1110 1108 1104 1099 1098 1065 1010 969	937 913
929 957	985 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	985 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	934 912
929 958	986 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	986 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	934 912
927 957	986 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	986 1037 1091 1111 1115 1113 1109 1105 1100 1090 1064 1000 956	934 912
924 954	983 1018 1079 1108 1114 1113 1110 1107 1103 1100 1086 1077 1044 983 944	983 1018 1079 1108 1114 1113 1110 1107 1103 1100 1086 1077 1044 983 944	924 984
912 944	976 1015 1070 1106 1113 1112 1109 1106 1102 1090 1084 1088 1076 1044 984 949	976 1015 1070 1106 1113 1112 1109 1106 1102 1090 1084 1088 1076 1044 984 949	921 691
922 949	975 1015 1070 1106 1113 1112 1109 1106 1102 1090 1084 1088 1076 1044 984 949	975 1015 1070 1106 1113 1112 1109 1106 1102 1090 1084 1088 1076 1044 984 949	921 691
922 949	977 1027 1083 1106 1110 1100 1105 1101 1090 1084 1089 1070 1052 937 952	977 1027 1083 1106 1110 1100 1105 1101 1090 1084 1089 1070 1052 937 952	923 694
921 950	970 1029 1082 1102 1106 1104 1101 1097 1093 1080 1070 1053 1000 952	970 1029 1082 1102 1106 1104 1101 1097 1093 1080 1070 1053 1000 952	924 696
920 950	978 1020 1079 1090 1101 1089 1095 1082 1087 1080 1062 1019	978 1020 1079 1090 1101 1089 1095 1082 1087 1080 1062 1019	
910 946	976 1025 1073 1091 1083 1090 1087 1082 1073 1049 997 949	976 1025 1073 1091 1083 1090 1087 1082 1073 1049 997 949	923 696
914 945	975 1019 1061 1074 1074 1071 1067 1060 1041 993 947	975 1019 1061 1074 1074 1071 1067 1060 1041 993 947	922 696
900 939	970 1002 1026 1031 1030 1029 1023 1013 901 945	970 1002 1026 1031 1030 1029 1023 1013 901 945	921 695
963 961 961 962 961 959 954 947	963 961 961 962 961 959 954 947	963 961 961 962 961 959 954 947	
934 935 935 934 932 930 925 915	934 935 935 934 932 930 925 915	934 935 935 934 932 930 925 915	
891	907 906 905 903 899 895	907 906 905 903 899 895	862

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Table E12B-1.1. Fission Power Generated in MFA-2 and Neighboring Assemblies at EOC 12B-1

CORE POS.	* * * * *	POWER IN MEGAWATTS			* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR	
2405	1.128E-01	3.513E+00	7.253E-02	3.698E+00	
2304	1.354E-02	4.712E+00	1.038E-02	4.736E+00	
2404	0.000E+00	5.704E+00	0.000E+00	5.704E+00	
2406	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
2506	1.258E-02	3.755E+00	9.636E-03	3.777E+00	
2507	1.486E-02	3.255E+00	9.946E-03	3.280E+00	
2508	1.377E-02	3.581E+00	9.684E-03	3.605E+00	

Table E12B-1.2. Assembly Averaged Total and Fast Flux in MFA-2 at EOC 12B-1

Assembly	Core Pos.	Flux (n/cm ² -sec)	
		Total	> 0.1 MeV
MFA-2	2405	3.498E+15	2.204E+15

Table E12B-1.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 12B-1

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7150E-02	1.4344E-02	0.0000E+00
-92.78	5.8369E-02	2.7760E-02	0.0000E+00
-87.78	9.3686E-02	4.4497E-02	0.0000E+00
-82.78	1.3592E-01	6.6500E-02	0.0000E+00
-77.78	1.8813E-01	9.6213E-02	0.0000E+00
-72.15	2.4819E-01	1.3487E-01	0.0000E+00
-65.90	3.0914E-01	1.8446E-01	0.0000E+00
-60.35	3.7232E-01	2.5246E-01	1.5371E-01
-55.49	4.5291E-01	3.3718E-01	1.7199E-01
-50.62	5.4413E-01	4.4363E-01	1.9375E-01
-47.17	6.1512E-01	5.4031E-01	2.1325E-01
-43.58	6.8917E-01	6.4855E-01	7.7158E-01
-38.45	7.9865E-01	7.8304E-01	8.5694E-01
-33.32	9.0128E-01	8.9858E-01	9.5443E-01
-28.20	9.9150E-01	9.9422E-01	9.7115E-01
-23.07	1.0683E+00	1.0740E+00	1.0441E+00
-17.94	1.1299E+00	1.1366E+00	1.1030E+00
-12.82	1.1752E+00	1.1816E+00	1.1065E+00
-7.69	1.2045E+00	1.2109E+00	1.1337E+00
-2.56	1.2176E+00	1.2243E+00	1.1459E+00
2.56	1.2141E+00	1.2216E+00	1.1537E+00
7.69	1.1934E+00	1.2018E+00	1.1343E+00
12.82	1.1559E+00	1.1654E+00	1.0991E+00
17.94	1.1020E+00	1.1130E+00	1.1049E+00
23.07	1.0306E+00	1.0414E+00	1.0343E+00
28.20	9.4338E-01	9.5191E-01	9.4838E-01
33.32	8.4274E-01	8.4695E-01	9.2603E-01
38.45	7.3006E-01	7.2303E-01	8.1028E-01
43.58	6.1156E-01	5.8320E-01	7.0153E-01
47.17	5.3255E-01	4.7667E-01	1.5398E-01
50.62	4.5898E-01	3.8401E-01	1.3187E-01
55.49	3.6644E-01	2.8345E-01	1.0771E-01
60.35	2.8356E-01	2.0295E-01	8.7293E-02
64.98	2.2889E-01	1.5216E-01	0.0000E+00
69.39	1.9466E-01	1.2400E-01	0.0000E+00
76.46	1.4585E-01	8.6466E-02	0.0000E+00
86.80	9.3839E-02	5.1235E-02	0.0000E+00
98.14	5.3566E-02	2.7581E-02	0.0000E+00
110.00	2.2672E-02	1.2140E-02	0.0000E+00

Table E12B-1.6. Fission Power Distribution by Pin in MFA-2 at EOC 12B-1

CORE POSITION 2405

	1.059	1.049	1.038	1.028	1.018	1.009	0.999	0.990							
	1.062	1.052	1.041	1.031	1.022	1.012	1.003	0.994	0.985						
	1.064	1.054	1.044	1.034	1.024	1.015	1.006	0.996	0.987	0.979					
	1.065	1.055	1.046	1.036	1.026	1.017	1.008	0.999	0.990	0.981	0.972				
	1.066	1.057	1.047	1.037	1.028	1.019	1.009	1.000	0.991	0.983	0.974	0.965			
	1.067	1.058	1.048	1.039	1.029	1.020	1.010	1.001	0.992	0.984	0.975	0.966	0.957		
	1.068	1.059	1.049	1.039	1.030	1.020	1.011	1.002	0.993	0.984	0.975	0.966	0.957	0.948	
1.069	1.069	1.060	1.050	1.040	1.031	1.021	1.012	1.002	0.993	0.984	0.975	0.966	0.957	0.948	0.939
	1.061	1.051	1.041	1.031	1.022	1.012	1.002	0.993	0.984	0.975	0.966	0.957	0.948	0.938	
	1.052	1.042	1.032	1.022	1.012	1.002	0.993	0.983	0.974	0.965	0.955	0.946	0.937		
	1.043	1.033	1.022	1.012	1.002	0.992	0.982	0.973	0.963	0.954	0.945	0.935			
	1.033	1.023	1.012	1.002	0.992	0.981	0.971	0.962	0.952	0.943	0.933				
	1.023	1.012	1.002	0.991	0.980	0.970	0.960	0.950	0.940	0.930					
	1.013	1.001	0.990	0.980	0.969	0.958	0.948	0.938	0.928						
	1.001	0.990	0.979	0.967	0.957	0.946	0.935	0.925							

Table E12B-1.8. Fast Flux Distribution by Pin in MFA-2 at EOC 12B-1

CORE POSITION 2405

1.087	1.081	1.074	1.067	1.059	1.051	1.042	1.033												
1.081	1.075	1.069	1.062	1.055	1.047	1.039	1.030	1.021											
1.074	1.069	1.063	1.057	1.050	1.043	1.035	1.026	1.017	1.008										
1.067	1.062	1.057	1.051	1.045	1.038	1.031	1.023	1.014	1.005	0.995									
1.059	1.055	1.050	1.045	1.039	1.033	1.026	1.018	1.010	1.002	0.992	0.982								
1.051	1.047	1.043	1.038	1.033	1.027	1.021	1.014	1.006	0.998	0.989	0.980	0.970							
1.041	1.038	1.035	1.031	1.026	1.021	1.015	1.009	1.002	0.994	0.986	0.977	0.967	0.957						
1.031	1.029	1.026	1.023	1.019	1.014	1.009	1.003	0.997	0.990	0.982	0.974	0.964	0.955	0.944					
1.019	1.017	1.014	1.011	1.007	1.003	0.998	0.992	0.985	0.978	0.970	0.962	0.952	0.942						
1.007	1.005	1.003	1.000	0.996	0.992	0.987	0.981	0.974	0.967	0.959	0.950	0.940							
0.996	0.994	0.992	0.989	0.985	0.981	0.976	0.970	0.963	0.955	0.947	0.938								
0.985	0.983	0.981	0.978	0.975	0.970	0.965	0.959	0.952	0.944	0.935									
0.974	0.973	0.971	0.968	0.964	0.960	0.954	0.948	0.941	0.933										
0.965	0.963	0.961	0.958	0.954	0.949	0.944	0.937	0.929											
0.955	0.954	0.951	0.948	0.944	0.939	0.933	0.926												

Table E12B-1.9. MFA-2 Duct Wall
Fast Flux Data at EOC 12B-1

Side	Flux > 0.1 MeV (n/cm ² -sec)
	MFA-2
E	2.1594E+15
SE	2.3617E+15
SW	2.3521E+15
W	2.1533E+15
NW	2.0190E+15
NE	2.0525E+15

Table E12B-1.10. Assembly Outlet Temperatures and
Flow Rates at EOC 12B-1

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
2405	1036	109980
2304	936	199130
2404	989	195840
2406	844	14020
2506	900	189360
2507	871	189360
2508	886	189360

Assembly flows are based on a calculated core pressure drop of 101.2 psi at a total reactor flow rate of 16.74E+06 lb/hr.

ASSEMBLY NO. 2405 MFA-2

Temperature map for bundle 30	ASSEMBLY NO. 2465	MFA-2
axial height		
921	949 950 949 940 945 942 938	910
	955 955 954 951 940 944 939	923
930	955 955 955 955 955 945 940 935	
	954 960 961 958 955 950 945 940 935	
908 931	1014 1026 1025 1021 1017 1011 995	
	1013 1045 1049 1047 1043 1038 1028 995 941	919 896
909 934	1046 1075 1078 1076 1072 1067 1058 1026	
	1077 1076 1067 1066 1063 1079 1073 1056 1066 942	920 897
	1063 1069 1066 1065 1061 1087 1082 1069 1030	
910 936	1098 1083 1097 1096 1095 1092 1087 1080 1060 1086 940	919 897
	1055 1092 1101 1100 1097 1093 1089 1083 1069 1028	
911 937	1053 1031 1040 1100 1101 1098 1094 1091 1087 1081 1066 1025	
	1066 1093 1102 1101 1098 1094 1091 1087 1081 1066 1025	
910 937	1054 1032 1084 1100 1102 1099 1096 1092 1089 1084 1076 1065 1088 933	913 893
	1055 1092 1102 1101 1090 1095 1091 1088 1084 1078 1083 1021	
909 937	1064 1029 1060 1101 1099 1096 1092 1089 1085 1082 1077 1071 1054 1011	
	1048 1089 1101 1101 1098 1095 1091 1088 1084 1080 1073 1057 1012	
906 934	981 1015 1076 1098 1101 1099 1096 1092 1089 1085 1062 1077 1067 1041 980 925	906 897
891 922	953 1025 1096 1100 1099 1094 1091 1088 1084 1080 1076 1066 1040 980 929	907 869
899 926	953 1012 1096 1100 1099 1094 1091 1088 1084 1080 1076 1066 1040 980 929	903 877
	1044 1087 1098 10908 10705 10922 1089 1085 1082 1077 1071 1054 1011	
899 927	955 1023 1070 1095 1096 1094 1091 1087 1084 1080 1076 1068 1047 993 932	906 879
	1049 1086 1095 1095 1092 1088 1085 1081 1077 1071 1055 1017	
899 928	956 1024 1076 1081 1083 1088 1087 1083 1079 1075 1067 1047 995 932	907 881
	1047 1083 1091 1091 1087 1084 1080 1076 1070 1055 1017	
898 928	957 1023 1073 1087 1088 1086 1082 1078 1074 1066 1046 994 931	906 881
	1044 1079 1087 1086 1082 1079 1075 1069 1055 1016	
	996 1020 1068 1081 1082 1079 1075 1071 1063 1044 992 929	905 881
	1040 1073 1079 1077 1074 1070 1064 1052 1014	
893 924	954 1015 1050 1059 1067 1064 1060 1054 1037 989 927	984 881
	1038 1055 1058 1056 1053 1048 1038 1007	
888 919	940 936 1025 1029 1027 1024 1020 1011 977 925	982 880
	995 1005 1005 1003 1000 995 998	
	940 940 941 942 941 940 938 933 926	
900	916 917 916 914 912 909	906
874	892 892 891 889 887 884 880	887

410

Table E12B-1.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 12B-1

temperature map for bundle		30	ASSEMBLY NO. 2405		MFA-2													
axial height		92.008 in																
		961			985	986	986	985	983	981	979							
				980			993	993	992	989	986	982	979					
						990	1001	1000	997	993	980	983	979	976				
								1011	1017	1018	1015	1010	1002	992				
		950	974			990	1011	1023	1020	1020	1024	1017	1006	991	977	955 933		
										1023	1040	1040	1040	1045	1037	1024 1003		
		950	975			999	1010	1040	1053	1050	1056	1051	1040	1022	997	977 956 934		
												1030	1055	1069	1074	1072 1067 1056 1037 1009		
		950	976			1001	1022	1050	1070	1070	1000	1076	1060	1054	1030	990 975 955 933		
												1034	1062	1080	1080	1089 1085 1078 1064 1041 1009		
		950	977			1002	1024	1055	1077	1009	1093	1091	1086	1076	1059	1031 996 973 953 933		
														1035	1065	1085 1095 1097 1095 1090 1001 1066 1040 1006		
		950	977			1003	1024	1055	1080	1093	1090	1090	1094	1080	1077	1050 1020 992 970 951 931		
										1032	1063	1085	1097	1100	1099	1095 1090 1088 1063 1035 1000		
		949	976			1003	1020	1051	1070	1093	1100	1100	1097	1093	1086	1074 1052 1022 906 967 949 930		
										1025	1055	1081	1095	1100	1100	1097 1093 1086 1075 1055 1026 992		
947	975			1001	1012	1041	1070	1089	1090	1100	1090	1094	1089	1081	1066	1042 1010 979 965 947 920		
944	971															1098	1098	1065 1042 1010 908 969 939 910
961	900			998	1010	1040	1069	1080	1097	1096	1097	1093	1088	1000	1065	1042 1010 908 969 939 910		
										1022	1053	1070	1092	1097	1097	1094 1090 1084 1072 1053 1025 992		
		960	900			999	1016	1040	1074	1089	1095	1095	1092	1080	1081	1069	1049 1020 908 971 942 912	
										1020	1050	1000	1091	1094	1092	1089 1083 1074 1057 1032 1000		
		959	900			1000	1019	1050	1073	1085	1090	1089	1085	1079	1069	1050 1023 991 972 943 914		
										1030	1050	1077	1005	1007	1005	1000 1072 1057 1033 1002		
		957	979			1001	1020	1047	1060	1070	1081	1079	1074	1064	1048	1023 992 972 944 915		
										1020	1053	1069	1076	1076	1073	1066 1052 1031 1002		
954	978			1001	1010	1041	1057	1064	1065	1062	1055	1041	1019	991	971	944 916		
										1024	1043	1055	1059	1057	1052	1042 1024 999		
		949	975			999	1012	1020	1039	1042	1042	1037	1027	1011	980	971 945 917		
										1014	1026	1032	1033	1031	1024	1012 994		
		942	969			996	1003	1009	1013	1014	1012	1007	990	983	972	945 918		
										1000	1003	1004	1004	1001	995	986		
										991	988	987	987	986	984	982 978 973		
										955	959	958	957	955	953	951 947 939		
		919			930	920	926	924	921	910	915							
																903		

Table E12B-1.18. Composition of MFA-2 at EOC 12B-1

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	8.0223E-06
			U-238	7.0573E-03	6.6785E-03
			Pu-239	0.0000E+00	2.8079E-04
			Pu-240	0.0000E+00	2.3050E-05
			FP	0.0000E+00	7.8311E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	6.1692E-06
			U-238	4.4270E-03	4.1442E-03
			Pu-239	1.7483E-03	1.2594E-03
			Pu-240	2.2290E-04	3.1036E-04
			Pu-241	1.9040E-05	2.7320E-05
			Pu-242	4.7330E-06	5.5604E-06
			Am-241	7.5700E-07	4.2159E-06
			FP	0.0000E+00	6.7305E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	5.4563E-06
			U-238	4.4270E-03	4.0711E-03
			Pu-239	1.7483E-03	1.1563E-03
			Pu-240	2.2290E-04	3.1010E-04
			Pu-241	1.9040E-05	2.7714E-05
			Pu-242	4.7330E-06	5.6012E-06
			Am-241	7.5700E-07	4.0868E-06
			FP	0.0000E+00	8.5027E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	5.0798E-06
			U-238	4.4270E-03	4.0322E-03
			Pu-239	1.7483E-03	1.1067E-03
			Pu-240	2.2290E-04	3.1465E-04
			Pu-241	1.9040E-05	2.8891E-05
			Pu-242	4.7330E-06	5.7418E-06
			Am-241	7.5700E-07	4.0895E-06
			FP	0.0000E+00	9.3277E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	5.1882E-06
			U-238	4.4270E-03	4.0434E-03
			Pu-239	1.7483E-03	1.1204E-03
			Pu-240	2.2290E-04	3.1285E-04
			Pu-241	1.9040E-05	2.8473E-05
			Pu-242	4.7330E-06	5.6911E-06
			Am-241	7.5700E-07	4.0842E-06
			FP	0.0000E+00	9.1001E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	5.7751E-06
			U-238	4.4270E-03	4.1020E-03
			Pu-239	1.7483E-03	1.1959E-03
			Pu-240	2.2290E-04	3.0437E-04
			Pu-241	1.9040E-05	2.6523E-05
			Pu-242	4.7330E-06	5.4725E-06
			Am-241	7.5700E-07	4.0722E-06
			FP	0.0000E+00	7.8629E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	6.7010E-06
			U-238	4.4270E-03	4.1887E-03
			Pu-239	1.7483E-03	1.3236E-03
			Pu-240	2.2290E-04	2.9767E-04
			Pu-241	1.9040E-05	2.4962E-05
			Pu-242	4.7330E-06	5.3341E-06
			Am-241	7.5700E-07	4.1564E-06
			FP	0.0000E+00	5.7988E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	9.5834E-06
			U-238	7.0573E-03	6.7844E-03
			Pu-239	0.0000E+00	2.1546E-04
			Pu-240	0.0000E+00	1.1550E-05
			FP	0.0000E+00	4.8879E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

4.17 Cycle 12B-2

Table B12B-2.1. Fission Power Generated in MFA-2 and Neighboring Assemblies at BOC 12B-2

CORE POS.	* * * * *	POWER IN MEGAWATTS		* * * * *
	BELOW CORE	IN CORE	ABOVE CORE	TOTAL PWR
2405	1.143E-01	3.442E+00	6.841E-02	3.625E+00
2304	1.377E-02	4.657E+00	9.900E-03	4.681E+00
2404	0.000E+00	5.611E+00	0.000E+00	5.611E+00
2406	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2506	1.271E-02	3.667E+00	9.049E-03	3.689E+00
2507	1.494E-02	3.172E+00	9.355E-03	3.196E+00
2508	1.385E-02	3.482E+00	9.068E-03	3.505E+00

Table B12B-2.2. Assembly Averaged Total and Fast Flux in MFA-2 at BOC 12B-2

Assembly	Core	Flux (n/cm ² -sec)	
	Pos.	Total	> 0.1 MeV
MFA-2	2405	3.431E+15	2.163E+15

Table B12B-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at BOC 12B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.8230E-02	1.4913E-02	0.0000E+00
-92.78	6.0673E-02	2.8855E-02	0.0000E+00
-87.78	9.7348E-02	4.6235E-02	0.0000E+00
-82.78	1.4116E-01	6.9060E-02	0.0000E+00
-77.78	1.9527E-01	9.9855E-02	0.0000E+00
-72.15	2.5743E-01	1.3988E-01	0.0000E+00
-65.90	3.2036E-01	1.9111E-01	0.0000E+00
-60.35	3.8533E-01	2.6120E-01	1.5916E-01
-55.49	4.6815E-01	3.4839E-01	1.7786E-01
-50.62	5.6166E-01	4.5778E-01	2.0009E-01
-47.17	6.3426E-01	5.5690E-01	2.1998E-01
-43.58	7.0986E-01	6.6785E-01	7.9521E-01
-38.45	8.2117E-01	8.0502E-01	8.8154E-01
-33.32	9.2484E-01	9.2204E-01	9.7980E-01
-28.20	1.0150E+00	1.0178E+00	9.9455E-01
-23.07	1.0906E+00	1.0964E+00	1.0663E+00
-17.94	1.1498E+00	1.1567E+00	1.1228E+00
-12.82	1.1914E+00	1.1980E+00	1.1222E+00
-7.69	1.2160E+00	1.2225E+00	1.1449E+00
-2.56	1.2233E+00	1.2300E+00	1.1515E+00
2.56	1.2132E+00	1.2208E+00	1.1533E+00
7.69	1.1858E+00	1.1941E+00	1.1273E+00
12.82	1.1416E+00	1.1509E+00	1.0858E+00
17.94	1.0820E+00	1.0928E+00	1.0851E+00
23.07	1.0065E+00	1.0171E+00	1.0104E+00
28.20	9.1718E-01	9.2556E-01	9.2224E-01
33.32	8.1647E-01	8.2069E-01	8.9734E-01
38.45	7.0548E-01	6.9886E-01	7.8312E-01
43.58	5.8991E-01	5.6279E-01	6.7662E-01
47.17	5.1328E-01	4.5974E-01	1.4844E-01
50.62	4.4203E-01	3.7016E-01	1.2700E-01
55.49	3.5264E-01	2.7311E-01	1.0361E-01
60.35	2.7275E-01	1.9550E-01	8.3894E-02
64.98	2.2007E-01	1.4656E-01	0.0000E+00
69.39	1.8713E-01	1.1944E-01	0.0000E+00
76.46	1.4020E-01	8.3297E-02	0.0000E+00
86.80	9.0238E-02	4.9377E-02	0.0000E+00
98.14	5.1558E-02	2.6605E-02	0.0000E+00
110.00	2.1860E-02	1.1728E-02	0.0000E+00

Table B12B-2.6. Fission Power Distribution by Pin in MFA-2 at BOC 12B-2

CORE POSITION 2405

1.063	1.052	1.042	1.031	1.021	1.011	1.001	0.991							
1.066	1.055	1.044	1.034	1.024	1.014	1.004	0.994	0.985						
1.067	1.057	1.047	1.036	1.026	1.016	1.007	0.997	0.988	0.978					
1.069	1.058	1.048	1.038	1.028	1.018	1.009	0.999	0.990	0.981	0.971				
1.070	1.060	1.049	1.039	1.030	1.020	1.010	1.001	0.992	0.982	0.973	0.964			
1.070	1.060	1.050	1.040	1.030	1.021	1.011	1.002	0.992	0.983	0.974	0.965	0.955		
1.071	1.061	1.051	1.041	1.031	1.021	1.012	1.002	0.993	0.984	0.975	0.965	0.956	0.946	
1.071	1.062	1.052	1.042	1.032	1.022	1.012	1.002	0.993	0.984	0.974	0.965	0.956	0.946	0.937
1.062	1.052	1.042	1.032	1.022	1.012	1.002	0.993	0.983	0.974	0.964	0.955	0.946	0.936	
1.053	1.043	1.032	1.022	1.012	1.002	0.992	0.982	0.973	0.963	0.954	0.944	0.935		
1.043	1.033	1.022	1.012	1.001	0.991	0.981	0.971	0.962	0.952	0.942	0.933			
1.033	1.022	1.011	1.001	0.990	0.980	0.970	0.960	0.950	0.940	0.930				
1.022	1.011	1.000	0.989	0.979	0.968	0.958	0.948	0.938	0.928					
1.011	1.000	0.989	0.977	0.967	0.956	0.945	0.935	0.925						
0.999	0.988	0.976	0.965	0.954	0.943	0.932	0.922							

Table B12B-2.8. Fast Flux Distribution by Pin in MFA-2 at BOC 12B-2

CORE POSITION 2405

[illegible]

Table B12B-2.9. MFA-2 Duct Wall
Fast Flux Data at BOC 12B-2

Side	Flux > 0.1 MeV (n/cm ² -sec) MFA-2
E	2.1185E+15
SE	2.3269E+15
SW	2.3154E+15
W	2.1105E+15
NW	1.9742E+15
NE	2.0064E+15

Table B12B-2.10. Assembly Outlet Temperatures and
Flow Rates at BOC 12B-2

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
2405	1030	109980
2304	934	199130
2404	985	195840
2406	841	14020
2506	896	189360
2507	867	189360
2508	881	189360

Assembly flows are based on a calculated core pressure drop of 101.2 psi at a total reactor flow rate of 16.74E+06 lb/hr.

temperature map for bundle
axial height 44.000 in

temperature map for bundle axial height	30	ASSEMBLY	NO.	2405	MFA-2
919	946	947	946	944	942 939 935
935	951	952	951	940	944 940 935
	951	957	957	955	951 947 941 936 932
905 928	951	1009	1041	1045	1042 1038 1033 1023 998 937
	1018	1021	1020	1017	1013 1006 991
907 931	954	1022	1071	1082	1081 1077 1073 1067 1058 1041 938
908 933	957	1026	1032	1030	1006 1002 1074 1054 1001 936
908 934	959	1027	1079	1094	1095 1083 1069 1085 1081 1073 1052 958 933
908 934	958	1027	1079	1095	1096 1085 1081 1075 1068 1020
906 934	980	1025	1078	1084	1086 1093 1086 1085 1081 1077 1071 1056 1015
906 934	980	1025	1078	1084	1086 1093 1086 1085 1081 1077 1071 1056 1015
903 931	957	1016	1095	1095	1092 1088 1095 1081 1078 1074 1067 1058 1006
896 919	949	1088	1095	1083	1098 1086 1083 1075 1070 1061 1035
896 923	949	1088	1095	1083	1098 1086 1083 1075 1070 1061 1035
896 924	951	1018	1072	1080	1086 1084 1081 1077 1073 1069 1061 1040 988 928
896 924	952	1019	1070	1085	1085 1082 1078 1075 1070 1064 1050 1011
895 924	952	1019	1070	1085	1085 1082 1078 1075 1070 1064 1050 1011
895 924	952	1019	1070	1085	1085 1082 1078 1075 1070 1064 1050 1011
893 923	952	1016	1082	1075	1075 1072 1068 1064 1057 1038
898 920	949	1090	1051	1061	1060 1057 1053 1047 1031 983 922
884 914	944	993	1019	1022	1021 1018 1014 1005 972 928
886 919	949	1088	1095	1083	1098 1086 1083 1075 1070 1061 1035
882	994	912	912	911	910 987 903
870	868	880	887	885	883 888 876

temperature map for bundle 38
axial height 50.500 in

Assembly No.	2405	MFA-2
933	951 961 961 959 956 953 949	921
951	967 969 966 963 959 955 958	934
	968 973 974 971 967 962 956 951 948	
919 943	968 1008 1020 1019 1016 1011 1004 998	
	1006 1036 1041 1039 1035 1029 1018 988 951	929 985
920 945	970 1020 1067 1061 1081 1078 1074 1065 1047 999 952	929 986
	1045 1083 1093 1083 1069 1085 1079 1063 1021	
921 947	973 1024 1076 1035 1097 1094 1091 1086 1077 1053 1008 959	928 966
	1047 1087 1059 1100 1087 1093 1089 1081 1063 1028	
921 949	975 1026 1078 1058 1101 1059 1095 1091 1086 1076 1052 997 947	926 984
	1047 1088 1101 1101 1059 1095 1091 1087 1079 1061 1016	
921 949	977 1026 1078 1098 1102 1100 1097 1093 1089 1084 1074 1048 993 943	923 902
	1046 1087 1091 1102 1098 1095 1092 1088 1084 1076 1057 1012	
919 948	977 1023 1078 1090 1102 1100 1097 1093 1090 1086 1080 1070 1043 997 939	919 899
	1077 1089 1089 1101 1059 1095 1092 1088 1084 1080 1071 1058 1081	
917 945	973 1088 1067 1094 1101 1100 1096 1093 1089 1086 1062 1076 1063 1032 972 935	916 896
904 936	967 1094 1039 1039 1065 1092 1088 1084 1069 1075 1052 1031 973 948	912 864
915 941	966 1085 1093 1099 1095 1092 1088 1084 1069 1075 1052 1031 973 948	912 864
	1034 1080 1036 1038 1036 1033 1089 1085 1082 1077 1058 1048 1001	
914 941	967 1016 1071 1062 1095 1084 1091 1088 1084 1080 1075 1054 1039 986 942	915 887
	1039 1081 1094 1094 1082 1088 1085 1081 1077 1069 1051 1008	
914 942	959 1018 1069 1069 1092 1090 1087 1083 1079 1074 1064 1048 989 942	916 888
	1036 1078 1098 1098 1087 1084 1080 1076 1069 1051 1009	
913 941	963 1017 1066 1084 1087 1095 1081 1078 1073 1063 1039 988 941	915 889
	1036 1073 1084 1084 1082 1078 1074 1065 1049 1008	
911 940	963 1014 1067 1079 1077 1073 1068 1059 1037 986 939	914 889
	1031 1056 1075 1074 1071 1067 1080 1045 1005	
907 937	966 1008 1048 1061 1061 1058 1054 1047 1028 982 937	913 889
	1028 1046 1051 1049 1046 1041 1038 990	
901 931	961 992 1015 1019 1016 1012 1081 971 936	912 888
	908 998 999 997 995 989 974	
	954 952 952 953 953 952 950 944 938	
919	926 926 926 925 924 921 916	907
894	908 908 899 897 895 892 887	875

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Table E12B-2.1. Fission Power Generated in MFA-2 and Neighboring Assemblies at EOC 12B-2

CORE POS.	***** BELOW CORE	POWER IN MEGAWATTS IN CORE	***** ABOVE CORE	***** TOTAL PWR
2405	1.152E-01	3.394E+00	7.416E-02	3.584E+00
2304	1.434E-02	4.566E+00	1.090E-02	4.591E+00
2404	0.000E+00	5.519E+00	0.000E+00	5.519E+00
2406	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2506	1.286E-02	3.632E+00	9.830E-03	3.654E+00
2507	1.487E-02	3.141E+00	1.004E-02	3.166E+00
2508	1.397E-02	3.460E+00	9.864E-03	3.483E+00

Table E12B-2.2. Assembly Averaged Total and Fast Flux in MFA-2 at EOC 12B-2

Assembly	Core Pos.	Flux (n/cm ² -sec) Total	> 0.1 MeV
MFA-2	2405	3.439E+15	2.159E+15

Table E12B-2.4. Axial Distribution of Total Flux, Fast Flux and Power in MFA-2 at EOC 12B-2

z (cm)	Total Flux	Flux > 0.1 MeV	Power
-97.78	2.7435E-02	1.4540E-02	0.0000E+00
-92.78	5.8972E-02	2.8134E-02	0.0000E+00
-87.78	9.4633E-02	4.5080E-02	0.0000E+00
-82.78	1.3724E-01	6.7339E-02	0.0000E+00
-77.78	1.8988E-01	9.7370E-02	0.0000E+00
-72.15	2.5038E-01	1.3641E-01	0.0000E+00
-65.90	3.1156E-01	1.8640E-01	0.0000E+00
-60.35	3.7474E-01	2.5492E-01	1.6323E-01
-55.49	4.5532E-01	3.3988E-01	1.8205E-01
-50.62	5.4634E-01	4.4629E-01	2.0425E-01
-47.17	6.1701E-01	5.4259E-01	2.2382E-01
-43.58	6.9064E-01	6.5032E-01	7.7500E-01
-38.45	7.9955E-01	7.8423E-01	8.5999E-01
-33.32	9.0163E-01	8.9910E-01	9.5703E-01
-28.20	9.9123E-01	9.9397E-01	9.7004E-01
-23.07	1.0676E+00	1.0731E+00	1.0424E+00
-17.94	1.1287E+00	1.1352E+00	1.1008E+00
-12.82	1.1736E+00	1.1796E+00	1.1024E+00
-7.69	1.2028E+00	1.2087E+00	1.1293E+00
-2.56	1.2159E+00	1.2222E+00	1.1415E+00
2.56	1.2126E+00	1.2196E+00	1.1499E+00
7.69	1.1923E+00	1.2003E+00	1.1309E+00
12.82	1.1553E+00	1.1645E+00	1.0962E+00
17.94	1.1019E+00	1.1129E+00	1.1049E+00
23.07	1.0312E+00	1.0421E+00	1.0350E+00
28.20	9.4452E-01	9.5338E-01	9.4965E-01
33.32	8.4443E-01	8.4913E-01	9.3177E-01
38.45	7.3216E-01	7.2561E-01	8.1607E-01
43.58	6.1394E-01	5.8602E-01	7.0728E-01
47.17	5.3513E-01	4.7962E-01	1.6172E-01
50.62	4.6167E-01	3.8694E-01	1.3919E-01
55.49	3.6902E-01	2.8610E-01	1.1425E-01
60.35	2.8591E-01	2.0517E-01	9.2964E-02
64.98	2.3107E-01	1.5393E-01	0.0000E+00
69.39	1.9665E-01	1.2552E-01	0.0000E+00
76.46	1.4750E-01	8.7626E-02	0.0000E+00
86.80	9.5009E-02	5.1989E-02	0.0000E+00
98.14	5.4280E-02	2.8019E-02	0.0000E+00
110.00	2.2985E-02	1.2342E-02	0.0000E+00

Table E12B-2.6. Fission Power Distribution by Pin in MFA-2 at EOC 12B-2

CORE POSITION 2405

	1.062	1.051	1.040	1.030	1.020	1.010	1.000	0.991											
	1.064	1.054	1.043	1.033	1.023	1.013	1.003	0.994	0.985										
	1.066	1.056	1.045	1.035	1.025	1.016	1.006	0.997	0.988	0.978									
	1.067	1.057	1.047	1.037	1.027	1.018	1.008	0.999	0.990	0.980	0.971								
	1.069	1.059	1.048	1.039	1.029	1.019	1.010	1.000	0.991	0.982	0.973	0.964							
	1.070	1.060	1.050	1.040	1.030	1.020	1.011	1.001	0.992	0.983	0.974	0.965	0.956						
1.070	1.061	1.051	1.041	1.031	1.021	1.011	1.002	0.993	0.983	0.974	0.965	0.956	0.947						
1.071	1.062	1.052	1.041	1.031	1.021	1.012	1.002	0.993	0.983	0.974	0.965	0.956	0.946	0.937					
1.063	1.053	1.042	1.032	1.022	1.012	1.002	0.992	0.983	0.974	0.964	0.955	0.946	0.936						
1.054	1.043	1.033	1.022	1.012	1.002	0.992	0.982	0.973	0.963	0.954	0.944	0.935							
1.044	1.034	1.023	1.012	1.002	0.992	0.981	0.972	0.962	0.952	0.943	0.933								
1.034	1.023	1.012	1.002	0.991	0.981	0.970	0.960	0.950	0.940	0.931									
1.024	1.013	1.002	0.990	0.980	0.969	0.958	0.948	0.938	0.928										
1.013	1.001	0.990	0.979	0.968	0.957	0.946	0.936	0.925											
1.001	0.990	0.978	0.966	0.955	0.944	0.933	0.923												

Table E12B-2.8. Fast Flux Distribution by Pin in MFA-2 at EOC 12B-2

CORE POSITION 2405

[illegible]

Table E12B-2.9. MFA-2 Duct Wall
Fast Flux Data at EOC 12B-2

Side	Flux > 0.1 MeV (n/cm ² -sec) MFA-2
E	2.1171E+15
SE	2.3183E+15
SW	2.3094E+15
W	2.1077E+15
NW	1.9718E+15
NE	2.0064E+15

Table E12B-2.10. Assembly Outlet Temperatures and
Flow Rates at EOC 12B-2

CORE POS.	CALCULATED OUTLET TEMP. (DEG F)	FLOW RATE (LB/H)
2405	1025	109980
2304	929	199130
2404	980	195840
2406	840	14020
2506	893	189360
2507	864	189360
2508	879	189360

Assembly flows are based on a calculated core pressure drop of 101.2 psi at a total reactor flow rate of 16.74E+06 lb/hr.

ASSEMBLY NO. 2485 MFA-2

[illegible]

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Table E12B-2.16. MFA-2 Sodium Subchannel Temperatures
at Top of Fuel Pin Bundle for EOC 12B-2

1	temperature map for bundle 38	ASSEMBLY NO. 2405	MFA-2	
	axial height			
	32.088 in			
953		977 977 977 976 974 972 978	942	
		971		955
		984 984 993 980 977 973 978		
		* 989 991 991 988 984 979 974 978 967 *		
		10822 10889 10808 10805 10800 993 982 *		
		942 956 * 989 1081 1013 1018 1018 1014 1007 997 981 968 *	947 926	
		1013 1030 1037 1038 1034 1027 1014 984		
		942 965 * 998 1088 1030 1043 1047 1046 1040 1030 1012 987 968 *	947 926	
		1029 1044 1058 1052 1061 1055 1045 1026 999		
		942 967 * 992 1012 1040 1058 1067 1066 1065 1057 1045 1019 988 966 *	946 926	
		1024 1051 1069 1076 1077 1074 1065 1053 1030 989		
		942 968 * 993 1014 1044 1066 1078 1081 1079 1074 1064 1047 1021 986 984 *	945 925	
		1025 1054 1073 1083 1085 1083 1078 1069 1054 1029 986		
		942 968 * 994 1014 1045 1068 1082 1086 1085 1082 1076 1065 1046 1016 982 961 *	942 924	
		1022 1052 1074 1085 1088 1086 1083 1077 1068 1051 1024 998		
		941 968 * 994 1011 1041 1066 1082 1087 1087 1085 1081 1074 1062 1041 1011 977 958 *	948 922	
		1015 1045 1069 1083 1088 1087 1084 1088 1074 1063 1044 1015 982 *		
		939 966 * 992 1082 1031 1059 1077 1086 1087 1085 1082 1077 1069 1055 1031 1008 969 956 *	939 921	
		953 * 989 1081 1029 1058 1076 1085 1086 1084 1081 1076 1068 1053 1030 1008 970 959 *	938 906	
		953 971 * 985 1083 1067 1088 1095 1085 1082 1078 1071 1068 1042 1014 983 *	931 882	
		1013 1043 1067 1088 1095 1085 1082 1078 1071 1068 1042 1014 983		
		952 971 * 990 1087 1037 1062 1082 1088 1075 1068 1057 1037 1009 978 952 *	934 905	
		1018 1047 1068 1079 1081 1088 1076 1071 1062 1046 1021 998		
		951 971 * 991 1018 1030 1051 1073 1077 1076 1073 1067 1055 1039 1012 981 963 *	935 906	
		1020 1047 1065 1073 1076 1073 1068 1068 1045 1022 992 *		
		949 971 * 992 1018 1037 1056 1065 1067 1062 1062 1052 1036 1012 982 963 *	936 988	
		1018 1042 1057 1064 1064 1061 1054 1041 1028 992 *		
		946 969 * 992 1080 1030 1046 1053 1054 1050 1043 1030 1008 981 962 *	936 989	
		1014 1032 1043 1047 1046 1041 1031 1014 990		
		942 965 * 998 1083 1018 1028 1031 1030 1026 1016 1000 978 962 *	936 918	
		1005 1016 1022 1023 1029 1014 1002 984 *		
		935 961 * 987 983 1088 1083 1084 1082 997 988 974 962 *	937 918	
		990 993 995 994 991 986 976 *		
		982 979 978 978 977 975 973 969 964 *		
		947	938	
		912	896	

Table E12B-2.18. Composition of MFA-2 at EOC 12B-2

Axial Level	Axial Range (cm)		Constituent	Atom Density (a/b-cm)	
	Lower	Upper		Fresh	End of Cycle
1	-128.05	-75.28	Na-23	5.3150E-03	5.3150E-03
			SS-316	6.4090E-02	6.4090E-02
2	-75.28	-62.78	Na-23	1.3177E-02	1.3177E-02
			SS-316	3.4175E-02	3.4175E-02
3	-62.78	-46.14	U-235	1.4143E-05	7.7500E-06
			U-238	7.0573E-03	6.6559E-03
			Pu-239	0.0000E+00	2.9345E-04
			Pu-240	0.0000E+00	2.5564E-05
			FP	0.0000E+00	8.5731E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
4	-46.14	-30.76	U-235	1.0160E-05	5.9829E-06
			U-238	4.4270E-03	4.1276E-03
			Pu-239	1.7483E-03	1.2365E-03
			Pu-240	2.2290E-04	3.1420E-04
			Pu-241	1.9040E-05	2.7999E-05
			Pu-242	4.7330E-06	5.6321E-06
			Am-241	7.5700E-07	4.3342E-06
			FP	0.0000E+00	7.0788E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
5	-30.76	-15.38	U-235	1.0160E-05	5.2546E-06
			U-238	4.4270E-03	4.0507E-03
			Pu-239	1.7483E-03	1.1309E-03
			Pu-240	2.2290E-04	3.1339E-04
			Pu-241	1.9040E-05	2.8388E-05
			Pu-242	4.7330E-06	5.6784E-06
			Am-241	7.5700E-07	4.1910E-06
			FP	0.0000E+00	8.9195E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
6	-15.38	0.00	U-235	1.0160E-05	4.8715E-06
			U-238	4.4270E-03	4.0098E-03
			Pu-239	1.7483E-03	1.0803E-03
			Pu-240	2.2290E-04	3.1783E-04
			Pu-241	1.9040E-05	2.9620E-05
			Pu-242	4.7330E-06	5.8324E-06
			Am-241	7.5700E-07	4.1901E-06
			FP	0.0000E+00	9.7749E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02

7	0.00	15.38	U-235	1.0160E-05	4.9810E-06
			U-238	4.4270E-03	4.0215E-03
			Pu-239	1.7483E-03	1.0942E-03
			Pu-240	2.2290E-04	3.1605E-04
			Pu-241	1.9040E-05	2.9184E-05
			Pu-242	4.7330E-06	5.7772E-06
			Am-241	7.5700E-07	4.1851E-06
			FP	0.0000E+00	9.5406E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
8	15.38	30.76	U-235	1.0160E-05	5.5789E-06
			U-238	4.4270E-03	4.0831E-03
			Pu-239	1.7483E-03	1.1712E-03
			Pu-240	2.2290E-04	3.0765E-04
			Pu-241	1.9040E-05	2.7136E-05
			Pu-242	4.7330E-06	5.5377E-06
			Am-241	7.5700E-07	4.1769E-06
			FP	0.0000E+00	8.2581E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
9	30.76	46.14	U-235	1.0160E-05	6.5307E-06
			U-238	4.4270E-03	4.1745E-03
			Pu-239	1.7483E-03	1.3027E-03
			Pu-240	2.2290E-04	3.0119E-04
			Pu-241	1.9040E-05	2.5490E-05
			Pu-242	4.7330E-06	5.3840E-06
			Am-241	7.5700E-07	4.2734E-06
			FP	0.0000E+00	6.1081E-04
			O-16	1.2760E-02	1.2760E-02
			Na-23	9.8100E-03	9.8100E-03
			SS-316	1.8990E-02	1.8990E-02
10	46.14	62.78	U-235	1.4143E-05	9.3618E-06
			U-238	7.0573E-03	6.7681E-03
			Pu-239	0.0000E+00	2.2612E-04
			Pu-240	0.0000E+00	1.2846E-05
			FP	0.0000E+00	5.3320E-05
			O-16	1.4143E-02	1.4143E-02
			Na-23	9.7416E-03	9.7416E-03
			SS-316	1.9073E-02	1.9073E-02
11	62.78	172.84	Na-23	8.2400E-03	8.2400E-03
			SS-316	2.5562E-02	2.5562E-02

Attachment 1
CHECKLIST FOR PEER REVIEW

Document Reviewed: *HNF-SD-FF-ANAL-009, Rev. 1*

Scope of Review:

Yes No NA

- ☐ ☐ ☐ * Previous reviews complete and cover analysis, up to scope of this review, with no gaps.
- ☒ ☐ ☐ Problem completely defined.
- ☐ ☐ ☒ Accident scenarios developed in a clear and logical manner.
- ☒ ☐ ☐ Necessary assumptions explicitly stated and supported.
- ☒ ☐ ☐ Computer codes and data files documented.
- ☒ ☐ ☐ Data used in calculations explicitly stated in document.
- ☒ ☐ ☐ Data checked for consistency with original source information as applicable.
- ☐ ☐ ☒ Mathematical derivations checked including dimensional consistency of results.
- ☒ ☐ ☐ Models appropriate and used within range of validity or use outside range of established validity justified.
- ☐ ☐ ☒ Hand calculations checked for errors. Spreadsheet results should be treated exactly the same as hand calculations.
- ☒ ☐ ☐ Software input correct and consistent with document reviewed.
- ☒ ☐ ☐ Software output consistent with input and with results reported in document reviewed.
- ☒ ☐ ☐ Limits/criteria/guidelines applied to analysis results are appropriate and referenced. Limits/criteria/guidelines checked against references.
- ☒ ☐ ☐ Safety margins consistent with good engineering practices.
- ☒ ☐ ☐ Conclusions consistent with analytical results and applicable limits.
- ☒ ☐ ☐ Results and conclusions address all points required in the problem statement.
- ☐ ☐ ☒ Format consistent with appropriate NRC Regulatory Guide or other standards
- ☐ ☒ * Review calculations, comments, and/or notes are attached.
- ☒ ☐ ☐ Document approved.

Robert L. Amine
Reviewer (Printed Name and Signature)

4-9-97
Date

* Any calculations, comments, or notes generated as part of this review should be signed, dated and attached to this checklist. Such material should be labeled and recorded in such a manner, as to be intelligible to a technically qualified third party.

DISTRIBUTION SHEET

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Irradiation Data for the MFA-1 and MFA-2 Tests in the FFTF		ECN No. 605714

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
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