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MARCH 10, 1978

LOFT LOCE TRANSIENT THERMAL ANALYSIS FOR
10x10x10 INCH TEE AND 14x14x10 INCH TEE
PRIMARY COOLANT BLOWDOWN PIPING

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MASTER

IDAHO NATIONAL ENGINEERING LABORATORY

DEPARTMENT OF ENERGY

IDAHO OPERATIONS OFFICE UNDER CONTRACT EY-76-C-07-1570

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Two tees in the LOFT primary coolant blowdown piping were analyzed for temperature transients occurring during a Loss of Coolant Experiment (LOCE). The surface heat transfer coefficients and boundary temperatures were conservatively chosen to represent the most severe conditions occurring in the tees during a LOCE. Temperature gradients will be used by the Applied Mechanics Branch to determine thermal stresses and the allowable thermal cycles for the piping. Only a LOCE thermal cycle was analyzed because the only other significant thermal cycles (heatup or cooldown) will generate small DT's and will have a minor effect on the allowable number of thermal cycles.

This LTR supports the stress analysis delineated in LTR 112-115.

LTR NO. 112-129

RE&C Report # RE-A-77-134

DATE March 10, 1978

WORK REQUEST NO. 52162-700-520

RESEARCH, ENGINEERING AND CONSTRUCTION REPORT ENGINEERING ANALYSIS DIVISION

THERMAL ANALYSIS

LOFT LOCE TRANSIENT THERMAL ANALYSIS FOR

10x10x10 INCH TEE AND 14x14x10 INCH TEE

PRIMARY COOLANT BLOWDOWN PIPING

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IDAHO NATIONAL ENGINEERING LABORATORY
LOFT TECHNICAL REPORT
LOFT PROGRAM

TITLE LOFT LOCE Transient Thermal Analysis for 10x10x10 Inch Tee and 14x14x10 Inch Tee Primary Coolant Blowdown Piping		REPORT NO. LTR112 129
AUTHOR S. K. Howell <i>S. K. Howell</i>		GWA NO. 52162-700-520
PERFORMING ORGANIZATION Thermal Analysis Branch		DATE March 10, 1978
LOFT APPROVAL <i>W. Smith</i> 2-21-78 <i>[Signature]</i> 2-22-78 <i>[Signature]</i> <i>[Signature]</i> PSB Mgr. RSB MGR. P&CSB Mgr.		

SUMMARY

Two tees in the LOFT primary coolant blowdown piping were analyzed for temperature transients occurring during a Loss of Coolant Experiment (LOCE). The surface heat transfer coefficients and boundary temperatures were conservatively chosen to represent the most severe conditions occurring in the tees during a LOCE. Temperature gradients will be used by the Applied Mechanics Branch to determine thermal stresses and the allowable thermal cycles for the piping. Only a LOCE thermal cycle was analyzed because the only other significant thermal cycles (heatup or cooldown) will generate small DT's and will have a minor effect on the allowable number of thermal cycles.

The tees are machined from blocks of stainless steel. A two-dimensional cross section of each tee was analyzed and chosen so as to result in the most severe temperature gradients (i.e., where the greatest material thickness exists). The temperature gradients for each case were expressed in the DT form required for the ASME Section III pipe equations.⁽¹⁾ DT values are tabulated in the report and have been forwarded to the Applied Mechanics Branch for stress analysis. Specific details and assumptions used in this analysis are found in appropriate sections of this report. Complete microfiche copies of the computer runs are contained in Appendix B.

I. INTRODUCTION

Machined block tees were analyzed for thermal gradients resulting during the thermal conditions experienced from a Loss of Coolant Experiment (LOCE). Since these tees are machined from steel blocks, high thermal stresses will result due to the square corners, machined weld preps, etc. It was, therefore, necessary to re-analyze these tees, since the original hot leg thermal analysis only considered commercially forged tees with smooth bends and corners, resulting in less severe thermal stresses.

Components used in the primary cooling blowdown loop of LOFT face severe temperature gradients due to the transients experienced during a LOCE. Prior to a LOCE, piping is at a steady state temperature of 610 °F^[2,3] in the hot leg of the cooling loop. Temperature in blowdown loop piping is also at same temperature as active loop piping. As the blowdown proceeds, the pressure in the system drops rapidly during a short time interval. As the pressure falls below saturation pressure of the cooling water, boiling commences in the pipes. Since the water temperature is a function of pressure in this case, the inside of the components are exposed to a rapid temperature transient. The magnitude of the thermal gradient is increased further by large heat transfer coefficients due to two phase flow and nucleate boiling on the inside pipe surface. Only thermal conditions in the hot leg portion of the blowdown loop was analyzed here, as it experienced more severe transients than the cold leg. COUPLE/MOD2^[4], a two-dimensional finite element heat conduction code, was used to calculate DT's for input into the ASME Section III pipe equations^[1].

II. ANALYSIS

In order to formulate a practical solution to the heat conduction problem, it was necessary to represent the tee in a simplified two-dimensional cross section.

The actual geometry of the tees are shown in Figures 1 and 2^[5]. The tees are machined from rectangular blocks of ASME SA312 Grade 316 stainless steel, having temperature dependent properties listed in Table I^[7]. Linear interpolation was used to derive values intermediate to the temperatures listed. The 10x10x10 inch tee has weld preps machined to match a 10 inch Sch 140 pipe. The 14x14x10 inch tee has weld preps machined to match a 14 inch Sch 160 pipe. All weld preps have 1/8 inch radii where they join with the block. The two dimensional representations of the tees for use in the finite element model are shown in Figures 3, 4, 5 and 6. Since a two-dimensional thermal model was chosen to evaluate a three-dimensional geometry, it was necessary to select cross sections and DT lines at locations where thermal stresses and gradients were greatest. Two cross sections were examined; one looking axially down the 10 inch weld prep for each tee across the thickest cross section, and one looking laterally onto the main block of each tee. These cross sections are drawn in dotted lines on Figures 1 and 2. On the lateral cross section, three DT lines were evaluated. Two lines across the neck of each weld prep (DT lines A and C) and one line across the corner of the weld prep were chosen. Looking axially down the largest weld prep for each tee, a DT line (line D) was chosen across the thickest cross section through the corner of each tee. X-Y plane geometry was used in all models. DT3 area's used for the lateral cross sections extend from the DT lines to the ends of the weld preps. DT3 areas used for the radial cross sections are drawn in Figures 5 and 6.

Proper heat transfer coefficients and boundary temperatures are vital to an accurate thermal-hydraulic model. The inside heat transfer coefficients were selected for the worst case blowdown data provided by the LOFT Class I piping specification and previous analysis^[2,3]. During the initial phase of LOCE, a coefficient of 10,000 Btu/hr-ft²-°F was used to represent nucleate boiling heat transfer for 13 seconds. After 15 seconds a coefficient of 100 Btu/hr-ft²-°F was used to represent the time the reactor vessel was filling with emergency core coolant (ECC). This coefficient was used out to 40 seconds, during which time the heat transfer occurs from forced convection of superheated steam on the pipe surface. After 44 seconds a heat transfer coefficient of 1000 Btu/hr-ft²-°F was used, as representing the ECC flowing through the pipe. The heat transfer coefficients and respective times are listed in Table II. Linear interpolation was used to derive values intermediate to those listed.

The outside boundary coefficients^[6] were computed as a combination of free air convection and thermal conductivity of 3 inches of insulation with a thermal conductivity of 0.0042 Btu/hr-in-°F. The heat capacity of the insulation was ignored in this analysis, but it is so small relative to the pipe that the errors introduced would be negligible. An effective outside convection coefficient of 0.17 Btu/hr-ft²-°F was used in this analysis.

Inside boundary temperatures were selected representing the fastest blowdown anticipated for LOFT^[2,3]. The temperatures are given as a function of time in Table III. Linear interpolation was used to derive temperatures between times listed. An ambient air temperature of 100 °F was used for the outside boundary.

TABLE I
MATERIAL PROPERTIES FOR 316 STAINLESS STEEL ⁽⁵⁾

Temp (°F)	Density (lbm/in ³)	Thermal Conductivity (Btu/hr-ft-°F)	Specific Heat (Btu/lbm-°F)
100	.2841	8.5	0.111
212	.2841	9.016	0.1181
302	.2841	9.407	0.1222
392	.2841	9.799	0.1253
482	.2841	10.19	0.1275
617	.2841	10.78	0.1298

TABLE II
HEAT TRANSFER COEFFICIENTS INSIDE LOFT BLOWDOWN
PIPING AS A FUNCTION OF TIME

Time (sec)	Heat Transfer Coefficient (Btu/hr-ft ² -°F)
0.0 to 13.0	10,000
13.0 to 15.0	10,000 → 100
15.0 to 40.0	100
40.0 to 44.0	100 → 1,000
44.0 to ∞	1,000

Outside effective convection coefficient = 0.17 Btu/hr-ft²-°F

TABLE III
FLUID TEMPERATURES INSIDE LOFT BLOWDOWN
PIPING AS A FUNCTION OF TIME

Time (sec)	Temp (°F)
0.0	610
2.0	536
7.0	490
13.0	270
40.0	260
100.0	100
∞	100

Figure 1. 14x14x10 inch tee (not to scale).

Figure 2. 10x10x10 inch tee (not to scale).

Figure 3. 14x14x10 inch tee cross section
 (lateral view).

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU,SEC,DEG FAR,LBM,IN

Figure 4. 10x10x10 inch tee cross section
 (lateral view).

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COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU.SEC.DEG FAR.LBM.IN

Figure 5. 14x14x10 inch tee cross section

(1.538, 7.15625) (axial view).

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COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU,SEC.DEG FAR,LBM,IN

Figure 6. 10x10x10 inch tee cross section

(1.9622, 5.71875) (axial view).

LTR12.129

III. RESULTS

Table IV gives the maximum DT's for each tee across each of the four DT lines. A complete record of DT's for every time increment is included in Appendix A. As would be expected, the maximum DT1 and DT2 occur across the thickest cross section.

Upon examining DT behavior versus time, one can see two peaks occurring during the transient. During the first phase of a LOCE, when nucleate boiling and two phase flow is the predominant heat transfer mechanism, the DT's increase rapidly. However, before the maximum peak is reached, after 13 seconds, the heat transfer coefficient falls from 10,000 Btu/hr-ft²-°F to 100 Btu/hr-ft²-°F and the DT's correspondingly decrease. After ECC circulates in the tees, the heat transfer coefficient rises to 1,000 Btu/hr-ft²-°F causing the DT's to increase. Due to the large heat capacity of the tee's, the maximum DT1 and many of the DT3's don't peak until some 3 to 5 minutes from the beginning of the LOCE. It should be apparent from the examination of DT behavior that the assumptions used in determining heat transfer coefficients are critical in their effects on the maximum thermal gradients. The inside surface heat transfer coefficient and coolant temperature represent the fastest LOCE expected in the LOFT facility (8-inch break area). These values are conservative as they allow predicting higher thermal gradients than expected. Also the nonnuclear tests conducted (L1 series) indicate that no cold ECC is experienced in the blowdown loop and the coolant temperature doesn't drop below 300 °F^[8].

All computer input data and DT's tabulated at each time step are listed in Appendix A. Appendix B contains complete microfiche copies of all computer runs.

TABLE IV

MAXIMUM DT'S IN LOFT PRIMARY COOLANT BLOWDOWN PIPING TEE'S FOR A LOCE TRANSIENT

<u>10x10x10 Inch Tee</u>	<u>Maximum DT1 (°F)</u>	<u>Time (Sec)</u>	<u>Maximum DT2 (°F)</u>	<u>Time (Sec)</u>	<u>Maximum DT3 (°F)</u>	<u>Time (Sec)</u>
DT line A (weld prep)	278.3	14.0	106.8	13.0	16.7	119.0
DT line B	319.1	14.0	89.5	13.0	4.7	104.0
DT line C (weld prep)	276.8	14.0	108.3	13.0	65.1	99.0
DT line D (radial line)	396.9	229.0	220.9	13.0	4.3	319.0
<u>14x14x10 Inch Tee</u>						
DT line A (weld prep)	300.5	99.0	137.2	13.0	47.3	159.0
DT line B	359.2	99.0	97.7	13.0	65.0	159.0
DT line C (weld prep)	254.7	99.0	105.7	13.0	49.0	79.0
DT line D (radial line)	411.5	359.0	240.5	99.0	76.71	514.0

IV. REFERENCES

1. American Society of Mechanical Engineers, ASME Boiler and Pressure Vessel Code, Section III, Nuclear Power Plants Components (1974).
2. LOFT Class 1 Nuclear Piping System, ANC-60139, Aerojet Nuclear Company, Idaho Falls, Idaho (January 15, 1973).
3. I. J. Ingvarsson, LOFT Blowdown Piping Loop Thermal Transient Analysis, LTR 112-41, EG&G Idaho, Inc. (1974).
4. E. C. Lemmon and R. L. Moore, COUPLE/MOD2 - A Two-Dimensional Finite Element Steady State and Transient Heat Conduction Code with Inverse Capabilities For Use On A CDC Cyber 76/Cyber 173 Computer, RE-A-77-017, EG&G Idaho, Inc., Engineering Division (June 1977).
5. Sketches measured and provided by Nathan B. Smith, EG&G Idaho, Inc. (October 1977).
6. J. P. Holman, Heat Transfer 3rd Edition, McGraw-Hill Book Co., Inc., New York (1972).
7. Nuclear Systems Materials Handbook Vol. 1, Part 1, Group 1, Section 4, Hanford Engineering Development Laboratory, Richland, Washington (September 30, 1976 Revision).
8. Gary M. Millar, Experiment Data Report for LOFT Nonnuclear Test L1-3, TREE-NUREG-1065, April 1977.

APPENDIX A
COMPUTER INPUT DATA ECHO
AND
DT LISTING FOR 10x10x10 AND
14x14x10 INCH TEES

567890123456789012345678901234567890123456789012345678901234567890

TITLE
LOFT LOCE TESTING FOR 14 IN TEE
UNITS-BTU, SEC, DEG FAR, LBM, IN

AUTOMESH

20 20 1 1 20 1 5.6875 7.15625 4.375
15 1 4.375 20 20 5.6875 7.15625 4.375
20 1 5.6875 20 20 5.6875 7.15625 4.375
20 20 5.6875 7.15625 4.375
1 20 5.6875 7.15625 4.375
1 15 4.375 15 1 4.375

MATERIAL

1 1 0.2841 316 SST (LB/IN²)
2.31500E-5 1.0 2

STEP

100.0 3 1 609.0 10 1

FUNCTIONS

100.0 6 2 THERMAL CONDUCTIVITY SST (BTU/HR-FT-F)
392.0 9.799 212.0 9.116 302.0 9.407
100.0 6 2 SPECIFIC HEAT SST (BTU/LBM-F)
392.0 0.111 212.0 0.1181 302.0 0.1222
3 0.1253 482.0 0.1275 617.0 0.1298
43.8 6 0.5 TIME INCREMENT (SEC)
4 1.0 12.6 0.5 12.7 1.0
6 1.0 43.8 5.0 100.0 5.0
0.0 610.0 2.0 536.0 7.0 490.0
13.0 270.0 40.0 260.0 100.0 100.0
0.0 6 INSIDE CONVECTION COEF. (BTU/SEC-IN²-F)
40.0 1.92770E-2 13.0 1.92770E-2 15.0 1.92770E-4
1.92770E-4 44.0 1.92770E-3 100.0 1.92770E-3

CONVECTSETS

55 1 20 20 293.27930E-7 100.0
20 1 20 293.27930E-7 100.0
1 1 1.0 5 1.0 4
7 1 1.0 5 1.0 4
14 1 1.0 5 1.0 4
22 1 1.0 5 1.0 4
31 1 1.0 5 1.0 4

0 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

0 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

41 -1 52 11 1.0 5 1.0 4
52 -1 64 12 1.0 5 1.0 4
53 -1 77 13 1.0 5 1.0 4
54 -1 81 14 1.0 5 1.0 4
55 -1 106 15 1.0 5 1.0 4
56 -1 122 16 1.0 5 1.0 4
57 -1 139 17 1.0 5 1.0 4
58 -1 157 18 1.0 5 1.0 4
59 -1 174 19 1.0 5 1.0 4

DT 123

14x14x10 Inch Tee

Input Data

DT Line D

0 1 2 3 4 5 6 7 8
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72

41	-1	52	11	1.0		5	1.0	4
52	-1	64	12	1.0		5	1.0	4
64	-1	77	13	1.0		5	1.0	4
77	-1	91	14	1.0		5	1.0	4
91	-1	106	15	1.0		5	1.0	4
106	-1	122	16	1.0		5	1.0	4
122	-1	139	17	1.0		5	1.0	4
139	-1	157	18	1.0		5	1.0	4
157	-1	176	19	1.0		5	1.0	4

14x14x10 Inch Tee
(cont)

DT123								
1								
3.09359	3.09359	4.3664	1.8208	5.6875	1.8208			
5.6675	7.15625	1.538	7.15625	1.538	4.649			

PLOTS
1 0 2 2 3 1 45 60 75
1 5 7 15 25 35

COUPLE
END OF DATA

0 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

A-A

5.594	5.8125	5.594	4.375	7.0385	5.6875
5.6	5.8125	7.0	10.8125	5.594	10.8125
5.594	4.375	9.9135	4.375	9.9135	5.375
5.0385	5.6875	7.0	10.8125	5.594	10.8125
7.1635	5.375	9.9135	4.375	9.9135	5.375
7.1635	5.375	5.594	5.594	5.594	4.375

C 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

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66
67
68
69

6 7 6 63.27930E-7 100.0
7 5 20 53.27930E-7 100.0

DT123

5.594	5.8125	5.594	4.375	7.0385	5.6875
7.0	5.8125	7.0	10.8125	5.594	10.8125
5.594	4.375	9.9135	4.375	9.9135	5.375
7.0385	5.6875	7.0	10.8125	5.594	10.8125
7.1635	4.375	9.9135	4.375	9.9135	5.375
7.1635	5.375	5.594	5.375	5.594	4.375

14x14x10 Inch Tee

PLOTS

1 C 2 2 0 1 45 60 75
3 7 15 25 35

COUPLE

END OF DATA

C 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

A-4

4567890123456789012345678901234567890123456789012345678901234567890

TITLE
LOFT LOCE TESTING FOR 10IN TEE (316SST)
UNITS-BTU, SEC, DEG FAR, LBM, IN

AUTOMESH

20 20 1 1
15 1 4.375 20 1 5.65625
20 1 5.65625 20 20 5.65625 5.71875
20 20 5.65625 5.71875 1 20 5.71875
1 20 5.71875 1 15 4.375
1 15 4.375 15 1 4.375

10x10x10 Inch Tee

DT Line D Input Data

MATERIAL

1 1
2.31500E-5 0.2641 316 SST (LBM/IN3)
1.0 1 2

STEP

600.0 3 1 609.0 10 1

FUNCTIONS

5 1
100.0 6 2 THERMAL CONDUCTIVITY SST (BTU/HR-FT-F)
392.0 6 9.799 212.0 9.016 302.0 9.407
2 6 2 462.0 10.19 617.0 10.78
100.0 0.111 212.0 0.1161 302.0 0.1222
392.0 0.1253 462.0 0.1275 617.0 0.1298
3 6 1 TIME INCREMENT (SEC)
0.0 0.5 12.6 0.5 12.7 1.0
43.8 1.0 43.9 5.0 100.0 5.0
4 0 INSIDE WATER TEMP (F)
0.0 610.0 2.0 536.0 7.0 490.0
13.0 270.0 40.0 260.0 100.0 100.0
5 6 INSIDE CONVECTION COEF. (BTU/SEC-IN2-F)
0.0 1.92770E-2 13.0 1.92770E-2 15.0 1.92770E-4
40.0 1.92770E-4 44.0 1.92770E-3 100.0 1.92770E-3

CONVECTSETS

55 1 20 20 203.27930E-7 100.0
20 1 20 203.27930E-7 100.0
1 -1 7 6 5 4
7 -1 14 7 5 1.0
14 -1 22 8 5 1.0
22 -1 31 9 5 1.0
31 -1 41 10 5 1.0

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

C 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

51 41 -1 52 11 1.0 5 1.0 4
52 52 -1 54 12 1.0 5 1.0 4
53 54 -1 57 13 1.0 5 1.0 4
54 77 -1 91 14 1.0 5 1.0 4
55 91 -1 106 15 1.0 5 1.0 4
56 106 -1 122 16 1.0 5 1.0 4
57 122 -1 139 17 1.0 5 1.0 4
58 139 -1 157 18 1.0 5 1.0 4
59 157 -1 176 19 1.0 5 1.0 4

DT123

1
3.09359 3.09359 4.225 1.9622 5.65625 1.9622

SPR HEAD WITH EYE TRACK PATENT PENDING

A-5

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

51	41	-1	52	11	1.0	5	1.0	4
52	52	-1	64	12	1.0	5	1.0	4
53	64	-1	77	13	1.0	5	1.0	4
54	77	-1	91	14	1.0	5	1.0	4
55	91	-1	106	15	1.0	5	1.0	4
56	106	-1	122	16	1.0	5	1.0	4
57	122	-1	139	17	1.0	5	1.0	4
58	139	-1	157	18	1.0	5	1.0	4
59	157	-1	176	19	1.0	5	1.0	4

10x10x10 Inch (cont)

DT123

61	1							
62	3.09359	3.09359	4.225	1.9622	5.65625	1.9622		
63	5.65625	5.71675	1.9622	5.71675	1.9622	4.225		

PLOTS

64	1	0	2	2	0	1		
65	1	3	7	15	25	35	45	60
66							75	

COUPLE

END OF DATA

0 1 2 3 4 5 6 7 8
123456789012345678901234567890123456789012345678901234567890

A-6

TITLE
LOFT LOCE TESTING FOR LOIN TEE (316SST)
UNITS-BTU, SEC, DEG FAR, LBM, IN

[illegible]

Input Data

1 1
1 0.2841 316 SS1 (LB/IN3)
2.31500E-5 1.0 1 2

FUNCTIONS

5							
100.0	6	2	THERMAL CONDUCTIVITY	SST (BTU/HR-FT-F)			
392.0		8.5	212.0	9.016	302.0	9.407	
		9.799	482.0	10.19	617.0	10.78	
100.0	6	2	SPECIFIC HEAT SST (BTU/LBM-F)				
392.0		0.111	212.0	0.121	202.0	0.1222	
		0.1253	482.0	0.1275	617.0	0.1298	
	6	1	TIME INCREMENT (SEC)				
0.0		0.5	12.6	0.5	12.7	1.0	
43.8		1.0	43.9	5.0	100.0	5.0	
	6	1	INSIDE WATER TEMP. (F)				
0.0		610.0	2.0	536.0	7.0	490.0	
13.0		270.0	40.0	281.0	100.0	100.0	
	6	1	INSIDE CONVECTION COEF. (BTU/SEC-IN2-F)				
0.0		1.92770E-2	13.0	1.92770E-2	15.0	1.92770E-4	
40.0		1.92770E-4	44.0	1.92770E-3	100.0	1.92770E-3	

129	1	1	20	1	1.0	5	1.0	4
	1	2	1	20	1.0	5	1.0	4
	5	20	5	83.2793	GE-7		100.0	

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6	7	6	63.27930E-7	100.0
7	5	20	53.27930E-7	100.0
DT123				
3				
4.375	5.78125	4.375	4.375	5.5
5.375	5.78125	5.375	8.15625	4.375
4.375	4.375	9.5	4.375	9.5
5.5	5.65625	5.375	8.15625	4.375
5.65625	4.375	9.5	4.375	9.5
5.65625	5.375	4.375	5.375	4.375
				5.65625
				8.15625
				5.375
				8.15625
				5.375
				4.375

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6	7	6	63.27930E-7		100.0	
7	5	20	53.27930E-7		100.0	
DT123						
4.375	5.78125	4.375	4.375	5.5	5.65625	
5.375	5.78125	5.375	8.15625	4.375	8.15625	
4.375	4.375	9.5	4.375	9.5	5.375	
5.5	5.65625	5.375	8.15625	4.375	8.15625	
5.65625	4.375	9.5	4.375	9.5	5.375	
5.65625	5.375	4.375	5.375	4.375	4.375	

10x10x10 Inch Tee

PLOTS
1 0 2 2 0 1
1 3 7 15 25 35 45 60 75

COUPLE

END OF DATA

0 1 2 3 4 5 6 7 8
1234567890123456789012345678901234567890123456789012345678901234567890

COU MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOC TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TR	DT3
1	0.0000	-1.1669	2.2105	-0.0968	-2.2105	609.5031	609.4230	609.5774	-1.1544
1	1.0000	-7.3479	6.1683	-6.1683	-2.8350	607.2629	607.2629	607.4165	-1.1535
1	1.0000	18.8765	13.8278	13.8278	-5.8595	605.1295	604.2928	604.4655	-1.1728
1	1.5000	31.6757	21.7072	21.7072	-9.3676	602.2361	600.9402	601.1487	-1.2085
1	2.0000	45.1700	29.4026	29.4026	-12.9681	599.1051	597.3447	597.6009	-1.2562
1	2.5000	52.1420	32.2275	32.2275	-14.8328	597.1398	595.1803	595.4938	-1.3125
1	3.0000	58.4491	33.5448	33.5448	-16.0993	595.5594	593.4482	593.8193	-1.3421
1	3.5000	63.5484	34.3944	34.3944	-17.1604	594.0466	591.8375	592.2399	-1.4024
1	4.0000	68.4304	35.0971	35.0971	-18.1335	592.5499	590.2512	590.6875	-1.4363
1	4.5000	73.2172	35.7517	35.7517	-19.0567	591.0407	588.6588	589.1234	-1.4646
1	5.0000	77.9479	36.3684	36.3684	-19.9438	589.5118	587.0508	587.5386	-1.4878
1	5.5000	82.6358	37.0164	37.0164	-20.8007	587.9609	585.4241	585.9302	-1.5061
1	6.0000	87.2853	37.6381	37.6381	-21.6306	586.3874	583.7775	584.2974	-1.5198
1	6.5000	91.8993	38.2542	38.2542	-22.4361	584.7914	582.1109	582.6399	-1.5291
1	7.0000	96.4799	38.8648	38.8648	-23.2190	583.1728	580.4237	580.9577	-1.5340
1	7.5000	107.3646	44.0063	44.0063	-23.9882	580.1688	577.1099	577.6425	-1.5335
1	8.0000	120.4421	50.3359	50.3359	-24.9305	576.5225	573.1774	573.7210	-1.5436
1	8.5000	134.4142	56.8304	56.8304	-25.2636	572.7984	569.9475	569.5093	-1.5618
1	9.0000	148.3865	63.1929	63.1929	-25.6627	568.7821	564.5228	565.1079	-1.5847
1	9.5000	163.6128	69.3447	69.3447	-26.0831	564.6036	559.9394	560.5495	-1.6101
1	10.0000	178.6277	75.2746	75.2746	-26.5068	560.2758	555.2117	555.8478	-1.6342
1	10.5000	193.8519	80.9896	80.9896	-26.9234	555.8053	550.3479	551.0097	-1.6618
1	11.0000	209.2269	86.5020	86.5020	-27.3259	551.1981	545.3542	546.0397	-1.6856
1	11.5000	224.8237	91.8256	91.8256	-27.7090	546.4588	540.2354	540.9418	-1.7084
1	12.0000	240.8247	96.9736	96.9736	-28.0667	541.5918	534.9960	535.7193	-1.7233
1	12.5000	256.3420	101.9585	101.9585	-28.4018	536.6012	529.6401	530.3757	-1.7356
1	13.0000	272.2577	106.7920	106.7920	-28.7057	531.4958	524.1714	524.9137	-1.7423
1	14.0000	278.3395	98.1666	98.1666	-29.1131	526.5619	519.5237	520.0526	-1.7528
1	15.0000	259.9744	75.9588	75.9588	-29.4417	526.9636	521.0496	520.5426	-1.7571
1	16.0000	244.2419	52.9797	52.9797	-29.8082	527.0257	522.0289	520.5359	-1.7493
1	17.0000	230.6052	46.2156	46.2156	-29.7344	526.8352	522.5894	520.1668	-1.7226
1	18.0000	218.6519	38.2001	38.2001	-29.6200	526.4541	522.8270	518.5306	-1.6864
1	19.0000	208.0019	34.3182	23.9728	-29.4582	525.9269	522.8139	518.6962	-1.6177
1	20.0000	198.6427	31.0950	23.9206	-29.2550	525.2838	522.6047	517.7140	-1.4907
1	21.0000	190.1520	28.3265	19.8149	-29.0265	524.5541	522.2412	515.6214	-1.3619
1	22.0000	182.4633	25.9749	16.7271	-28.7974	523.7488	521.7550	515.4464	-1.2335
1	23.0000	175.4669	23.9705	14.4110	-28.5735	522.8827	521.1708	514.2104	-1.1084
1	24.0000	169.9223	22.2771	12.6611	-28.3277	521.9655	520.5077	512.9296	-1.0082
1	25.0000	163.1835	20.6310	11.3976	-28.0310	521.0046	519.7807	511.6165	-0.9162
1	26.0000	157.7300	19.5955	10.4541	-27.6995	520.0061	519.0014	510.2811	-0.8204
1	27.0000	152.7641	18.5498	9.7702	-27.3498	518.9748	518.1793	508.9508	-0.7285
1	28.0000	148.6421	17.6540	9.2845	-26.9800	517.9150	517.3218	507.5717	-0.6301
1	29.0000	143.7081	16.8489	8.9498	-26.6885	516.8302	516.4350	506.2084	-0.5265
1	30.0000	139.6711	16.2334	8.7301	-26.3334	515.7234	515.5237	504.8447	-0.4190
1	31.0000	135.9045	15.6716	8.5978	-25.9716	514.5975	514.5975	503.4633	-0.3087
1	32.0000	132.3849	15.1689	8.5315	-25.6189	513.4551	513.6432	502.1266	-0.1966
1	33.0000	129.0518	14.7731	8.5146	-25.2731	512.2983	512.6799	500.7761	-0.0838
1	34.0000	126.0071	14.4140	8.5343	-24.9440	511.1293	511.7046	499.4333	0.0271
1	35.0000	123.1145	14.1028	8.5808	-24.6328	509.9499	510.7190	498.0991	0.1300
1	36.0000	120.3944	13.8322	8.6465	-24.3322	508.7620	509.7249	496.7742	0.2307

10x10x10 Inch Tee

DT Line A

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOC TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TR	DT3
1	37.0000	117.8447	13.5961	8.7253	-13.5961	507.5669	508.7236	495.4592	13.2644
1	38.0000	115.4505	13.3891	8.8127	-13.3891	506.3663	507.7163	494.1544	13.3619
1	39.0000	113.1938	13.2069	8.9052	-13.2069	505.1614	506.7039	492.8600	13.4639
1	40.0000	111.0648	13.0456	9.0001	-13.0456	503.9534	505.6874	491.5762	13.5613
1	41.0000	118.7486	15.6008	15.4917	-15.6008	500.5993	502.1305	488.1413	13.6682
1	42.0000	132.9807	25.2678	25.2678	-19.8444	495.6927	496.7769	483.1928	13.7841
1	43.0000	150.3915	35.6794	35.6794	-24.7633	489.8958	490.4348	477.4128	13.9021
1	44.0000	168.3219	44.9564	44.9564	-29.5832	483.7631	483.7701	471.3568	14.0211
1	45.0000	203.1361	50.0047	50.0047	-36.2846	462.4358	462.1938	450.5378	14.1413
1	46.0000	219.3730	47.3405	47.3405	-37.8066	444.1194	444.2044	432.4747	14.2615
1	49.0000	227.7458	44.1045	44.1045	-37.7327	427.0521	427.5760	415.4383	14.3817

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS1)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	37.0000	117.8487	13.5961	8.7253	-13.5961	507.5669	508.7236	495.4592	13.2644
1	38.0000	119.4502	13.3891	8.8127	-13.3891	506.3863	507.7163	494.1544	13.2619
1	39.0000	113.1938	13.2069	8.9052	-13.2069	505.1614	506.7039	492.8600	13.8439
1	40.0000	111.0698	13.0436	9.0001	-13.0436	503.9534	505.6874	491.5762	14.1113
1	41.0000	118.7486	15.6008	15.4917	-15.6008	500.5993	502.1305	488.1413	13.9892
1	42.0000	130.9807	25.2678	25.2678	-25.2678	495.6927	496.7769	483.1928	13.5841
1	43.0000	130.3485	35.6794	35.6794	-35.6794	489.8958	490.4348	477.4128	13.0221
1	44.0000	16.3219	44.9564	44.9564	-44.9564	483.7631	483.7701	471.3568	12.4134
1	49.0000	203.1301	50.0047	50.0047	-50.0047	462.4328	462.1938	450.5378	11.6559
1	54.0000	219.3730	47.3405	47.3405	-47.3405	444.1194	444.2044	432.4747	11.7207
1	59.0000	232.7458	44.1045	44.1045	-44.1045	427.0531	427.5760	415.4383	12.1377
1	64.0000	232.0933	41.5475	41.5475	-41.5475	410.6471	411.6079	398.9257	12.8822
1	69.0000	234.1430	39.6902	39.6902	-39.6902	394.6490	396.0301	382.7595	13.2702
1	74.0000	234.8166	38.3883	38.3883	-38.3883	378.9354	380.7143	366.8672	13.8472
1	79.0000	234.6549	37.3970	37.3970	-37.3970	363.4416	365.5367	351.2077	14.3890
1	84.0000	233.9958	36.6901	36.6901	-36.6901	348.1287	350.6387	335.7538	14.8849
1	89.0000	233.0521	35.1587	35.1587	-35.1587	332.9696	335.8141	320.4629	15.3311
1	94.0000	231.9632	33.7496	33.7496	-33.7496	317.9478	321.1035	305.3756	15.7279
1	99.0000	230.8193	32.4315	32.4315	-32.4315	303.0428	306.4902	290.4123	16.0780
1	104.0000	224.6198	30.8983	30.8983	-30.8983	289.6078	293.4640	277.1016	16.3624
1	109.0000	221.3498	29.7841	29.7841	-29.7841	277.4152	281.7085	265.1365	16.7220
1	114.0000	204.9474	28.8266	28.8266	-28.8266	266.1277	270.8243	254.1289	16.6954
1	119.0000	194.1850	26.9007	26.9007	-26.9007	255.5028	260.6557	243.9281	16.7277
1	124.0000	183.4457	25.1085	25.1085	-25.1085	245.7607	251.1182	234.4482	15.6700
1	129.0000	172.9371	23.4918	23.4918	-23.4918	236.5439	242.1556	225.6251	16.3306
1	134.0000	162.7830	21.9205	21.9205	-21.9205	227.9073	233.7231	217.4061	16.3170
1	139.0000	153.0577	20.5021	20.5021	-20.5021	219.3128	225.7848	209.7459	16.6388
1	144.0000	143.7996	19.1851	19.1851	-19.1851	212.2265	218.3096	202.6035	15.7061
1	149.0000	133.0223	17.9595	17.9595	-17.9595	205.1176	211.2593	195.9415	15.3378
1	154.0000	126.7257	16.8167	16.8167	-16.8167	198.4572	204.6387	189.7254	14.9133
1	159.0000	118.9001	15.7496	15.7496	-15.7496	192.2180	199.3946	183.9233	14.4713
1	164.0000	111.5299	14.7515	14.7515	-14.7515	186.3733	192.5150	178.5059	14.0091
1	169.0000	104.2562	13.8172	13.8172	-13.8172	180.8982	186.9790	173.4460	13.5330
1	174.0000	98.0765	12.9429	12.9429	-12.9429	175.7693	181.7662	168.7181	13.0480
1	179.0000	91.9462	12.1247	12.1247	-12.1247	170.9645	176.8581	164.2993	12.5588
1	184.0000	86.1521	11.3587	11.3587	-11.3587	166.4638	172.2367	160.1689	12.0678
1	189.0000	80.7884	10.6413	10.6413	-10.6413	162.2484	167.8859	156.3075	11.5784
1	194.0000	75.7178	9.9899	9.9899	-9.9899	158.3004	163.7906	152.6972	11.0934
1	199.0000	70.9511	9.3401	9.3401	-9.3401	154.6031	159.9366	149.3215	10.6152
1	204.0000	66.5003	8.7506	8.7506	-8.7506	151.1408	156.3103	146.1648	10.1457
1	209.0000	62.3175	8.1983	8.1983	-8.1983	147.8986	152.8988	143.2122	9.6867
1	214.0000	58.3968	7.6810	7.6810	-7.6810	144.8626	149.6900	140.4507	9.2393
1	219.0000	54.7267	7.1963	7.1963	-7.1963	142.0198	146.6722	137.8677	8.8045
1	224.0000	51.2757	6.7423	6.7423	-6.7423	139.3578	143.8344	135.4514	8.3821
1	229.0000	48.0470	6.3170	6.3170	-6.3170	136.8652	141.1664	133.1906	7.9756
1	234.0000	45.0213	5.9189	5.9189	-5.9189	134.5311	138.5582	131.0759	7.5824
1	239.0000	42.1860	5.5453	5.5453	-5.5453	132.3456	136.3006	129.0970	7.2036
1	244.0000	39.5292	5.1957	5.1957	-5.1957	130.2990	134.0848	127.2454	6.8395
1	249.0000	37.0398	4.8682	4.8682	-4.8682	128.3826	132.0025	125.5126	6.4899
1	254.0000	34.7073	4.5614	4.5614	-4.5614	126.5881	130.0459	123.8911	6.1547

10x10x10 Inch Tee

DT Line A

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS1)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	259.0000	32.5219	4.2740	3.5461	-4.2740	124.9076	128.2075	122.3736	5.8339
1	264.0000	30.4743	4.0048	3.3206	-4.0048	123.3340	126.4803	120.9533	5.2770
1	269.0000	28.5559	3.7526	3.1096	-3.7526	121.8602	124.8579	119.6240	5.2339
1	274.0000	26.7585	3.5163	2.9122	-3.5163	120.4801	123.3339	118.3797	4.9542
1	279.0000	25.0745	3.2950	2.7274	-3.2950	119.1676	121.9024	117.2149	4.6875
1	284.0000	23.4968	3.0877	2.5545	-3.0877	117.9771	120.5580	116.1246	4.4335
1	289.0000	22.0166	2.8934	2.3927	-2.8934	116.8435	119.2955	115.1038	4.1917
1	294.0000	20.6337	2.7115	2.2412	-2.7115	115.7317	118.1099	114.1462	3.9617
1	299.0000	19.3382	2.5410	2.0986	-2.5410	114.6872	116.9966	113.2535	3.7431
1	304.0000	18.1206	2.3813	1.9667	-2.3813	113.6557	115.9513	112.4159	3.5365

COU MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
LOFT LOCE TESTING FOR 10IN TEE (316SS1)

UNITS-BTU, SEC, DEG FAR, LBM, IN
SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	259.0000	32.5219	4.2740	3.5461	-4.2740	124.9076	128.2075	122.3736	5.6339
1	264.0000	30.4743	4.0048	3.3206	-4.0048	123.3340	126.4803	120.9533	5.5270
1	269.0000	28.5559	3.7526	3.1096	-3.7526	121.8602	124.8579	119.6240	5.2339
1	274.0000	26.7585	3.5163	2.9122	-3.5163	120.4801	123.3339	118.3797	4.9542
1	279.0000	25.0745	3.2950	2.7274	-3.2950	119.1876	121.9024	117.2149	4.6875
1	284.0000	23.4968	3.0677	2.5545	-3.0677	117.9771	120.5580	116.1246	4.4335
1	289.0000	22.0166	2.8934	2.3927	-2.8934	116.8435	119.2955	115.1038	4.1917
1	294.0000	20.6337	2.7115	2.2412	-2.7115	115.7617	118.1099	114.1482	3.9617
1	299.0000	19.3362	2.5410	2.0995	-2.5410	114.7672	116.9966	113.2535	3.7431
1	304.0000	18.1206	2.3813	1.9667	-2.3813	113.8557	115.9513	112.4159	3.5355

CURRENT EXTREME VALUES ARE

DT1-MAX DT1-MIN DT2-MAX DT2-MIN DT3-MAX DT3-MIN
276.3398 -1.1669 106.7920 16.7277 -0.7423

10 x 10 x 10 Inch Tee

DT Line A

COU MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
LOFT LOCE TESTING FOR 10IN TEE (316SS1)

UNITS-BTU, SEC, DEG FAR, LBM, IN
SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
2	0.0000	-0.9133	0.2161	-0.1590	0.2161	609.7015	609.4502	609.6346	-0.1844
2	1.0000	7.2807	7.4010	7.4010	-2.5946	607.9830	607.2791	607.4784	-0.1993
2	1.0000	18.7149	15.8663	15.8663	-5.8334	605.5044	604.3213	604.5529	-0.2316
2	1.5000	31.7937	24.1085	24.1085	-9.4511	602.5823	601.0018	601.2827	-0.2810
2	2.0000	45.9310	31.8207	31.8207	-13.2737	599.3349	597.4546	597.6010	-0.3464
2	2.5000	54.7039	33.5142	33.5142	-15.4341	597.1061	595.3587	595.7745	-0.4158
2	3.0000	61.7158	33.7620	33.7620	-17.0373	595.1984	593.5868	594.1730	-0.4862
2	3.5000	68.0744	33.5969	33.5969	-18.4174	593.3908	592.1282	592.6851	-0.5569
2	4.0000	74.1482	33.5828	33.5828	-19.6327	591.6074	590.5888	591.2164	-0.6276
2	4.5000	80.0719	33.4721	33.4721	-20.8761	589.8197	589.0397	589.7379	-0.6982
2	5.0000	85.0000	33.3700	33.3700	-22.0162	588.0162	587.4723	588.2411	-0.7689

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
2	0.0000	-9.1333	7.2161	-1.1593	2.2161	609.7015	609.4502	609.6346	-1.1844
2	1.0000	7.2807	7.4010	7.4010	-2.3946	607.9830	607.2791	607.4784	-1.1993
2	2.0000	18.7149	15.8683	15.8683	-5.8334	605.5044	604.3213	604.5529	-1.2316
2	3.0000	31.7937	24.1065	24.1065	-9.4511	602.5823	601.0018	601.2627	-1.2810
2	4.0000	45.9310	31.8207	31.8207	-13.2737	599.3349	597.4546	597.8010	-1.3464
2	5.0000	54.7039	33.5142	33.5142	-15.4341	597.1061	595.5587	595.7745	-1.4158
2	6.0000	61.7156	33.7620	33.7620	-17.0373	595.1984	593.6868	594.1730	-1.4862
2	7.0000	62.0744	33.6969	33.6969	-18.4174	593.3908	592.1282	592.6851	-1.5559
2	8.0000	74.1485	33.5828	33.5828	-19.6837	591.6074	590.5888	591.2164	-1.6276
2	9.0000	80.0719	33.4771	33.4771	-20.8761	589.8197	589.0397	589.7379	-1.6982
2	10.0000	85.6916	33.3702	33.3702	-22.0114	588.0162	587.4723	588.2411	-1.7688
2	11.0000	91.6528	33.2739	33.2739	-23.0979	586.1917	585.8328	586.7231	-1.8393
2	12.0000	97.3461	33.1799	33.1799	-24.1406	584.3440	584.2735	585.1634	-1.9098
2	13.0000	102.9853	33.0859	33.0859	-25.1431	582.4719	582.6413	583.6215	-1.9802
2	14.0000	108.5741	32.9902	32.9902	-26.1082	580.5748	580.9870	582.0376	-2.0505
2	15.0000	112.2136	32.8932	32.8932	-28.8103	577.3753	577.6949	578.8263	-2.1315
2	16.0000	134.1909	44.5405	44.5405	-32.1139	573.5931	573.8016	575.0263	-2.2247
2	17.0000	149.3221	50.6117	50.6117	-35.6645	569.4635	569.6236	570.9536	-2.3300
2	18.0000	165.1769	56.2994	56.2994	-39.1335	565.0745	565.2605	566.7070	-2.4466
2	19.0000	181.5684	61.5845	61.5845	-43.0739	560.4640	560.7457	562.3193	-2.5735
2	20.0000	198.3956	66.4915	66.4915	-46.8505	556.0523	556.0019	557.8021	-2.7102
2	21.0000	215.5925	71.0509	71.0509	-50.6472	551.6523	551.3063	553.1619	-2.8556
2	22.0000	233.1087	75.2913	75.2913	-54.4506	545.4738	546.3938	548.4030	-3.0092
2	23.0000	250.9078	79.2401	79.2401	-58.2513	540.1235	541.3885	543.5288	-3.1702
2	24.0000	268.9517	82.9175	82.9175	-62.0399	534.6089	536.2742	538.5423	-3.3381
2	25.0000	287.2082	86.3430	86.3430	-65.8089	528.9363	530.9345	533.4467	-3.5122
2	26.0000	305.6521	89.5329	89.5329	-69.5527	523.1105	525.5524	528.2444	-3.6920
2	27.0000	319.1527	92.6169	92.6169	-73.2811	516.1370	520.9408	523.9439	-3.8761
2	28.0000	316.1312	60.6607	60.6607	-66.3014	512.7451	522.0103	525.2280	-4.0631
2	29.0000	311.1461	47.3141	47.3141	-62.3116	509.6431	522.7542	525.9152	-4.2510
2	30.0000	305.9815	36.6528	36.6528	-58.3658	507.3027	522.7342	526.1598	-4.4399
2	31.0000	299.7661	28.7040	28.7040	-54.5664	505.0320	522.6150	526.0729	-4.6288
2	32.0000	293.2391	22.3036	22.3036	-50.9776	502.9646	522.2758	525.7357	-4.8177
2	33.0000	286.5743	17.2528	17.2528	-47.6359	501.0532	521.7575	525.2081	-5.0066
2	34.0000	279.9060	13.2531	13.2531	-44.2584	499.2631	521.1286	524.5349	-5.1955
2	35.0000	273.3262	10.6875	10.6875	-41.7462	497.5692	520.3880	523.7501	-5.3844
2	36.0000	266.8966	7.5797	7.5797	-39.1992	495.9531	519.5678	522.8793	-5.5733
2	37.0000	260.6587	36.8995	36.8995	-36.6995	494.4009	518.6853	521.9426	-5.7622
2	38.0000	254.6371	34.8332	34.8332	-34.8332	492.9023	517.7539	520.9553	-5.9511
2	39.0000	248.8468	32.4727	32.4727	-32.9827	491.4493	516.7840	519.9294	-6.1400
2	40.0000	243.2949	1.6994	1.6994	-31.3294	490.0358	515.7838	518.8743	-6.3289
2	41.0000	237.9829	29.8551	29.8551	-29.8551	488.6569	514.7601	517.7975	-6.5178
2	42.0000	232.9078	26.5420	26.5420	-28.5420	487.3087	513.7180	516.7048	-6.7067
2	43.0000	228.0672	27.3734	27.3734	-27.3734	485.9881	512.6517	515.6007	-6.8956
2	44.0000	223.4520	25.3336	25.3336	-26.3336	484.6924	511.5945	514.4888	-7.0845
2	45.0000	219.0523	23.4083	23.4083	-25.4083	483.4194	510.5193	513.3720	-7.2734
2	46.0000	214.8685	21.5845	21.5845	-24.5845	482.1671	509.4382	512.2527	-7.4623
2	47.0000	210.8627	20.8505	20.8505	-23.8505	480.9339	508.3528	511.1324	-7.6512
2	48.0000	207.0887	20.1958	20.1958	-23.1958	479.7184	507.2648	510.0125	-7.8401
2	49.0000	203.4774	22.6108	22.6108	-22.6108	478.5192	506.1752	508.8943	-8.0290

10 x 10 x 10 Inch Tee

DT Line B

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
2	37.0000	700.0397	22.0873	-1.1065	-22.0873	477.3351	505.7849	507.7783	-2.6934
2	38.0000	195.7609	41.6178	6.0886	-21.6178	476.1652	503.9947	506.6653	-2.8706
2	39.0000	193.6504	21.1958	14.1616	-21.1958	475.0084	502.9032	505.5556	-3.0478
2	40.0000	190.8620	20.8155	26.7878	-20.8155	473.8639	501.8170	504.4500	-3.2250
2	41.0000	194.6656	22.4066	6.3731	-22.4066	471.2192	498.3208	500.9458	-3.4022
2	42.0000	204.3987	23.5133	15.0146	-23.5133	467.3379	493.1477	495.7923	-3.5794
2	43.0000	217.0535	29.2404	25.5120	-29.2404	462.6149	487.0737	489.7750	-3.7566
2	44.0000	230.8632	33.0530	30.2523	-33.0530	457.4320	480.7254	483.5156	-3.9338
2	45.0000	264.8058	39.5973	36.8995	-39.5973	436.3141	459.8568	463.1850	-4.1110
2	46.0000	283.1230	41.2624	22.5242	-41.2624	417.2716	442.1560	445.9048	-4.2882

COUPLER NO. 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBN, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TR	DT3
NNNN	37.0000	200.0397	22.0873	-1.1065	-22.0873	477.3351	505.0849	507.7783	-2.6934
NNNN	38.0000	195.7063	21.6178	.0086	-21.6178	476.1652	503.0947	505.6653	-2.6706
NNNN	39.0000	193.6504	21.1958	.1416	-21.1958	475.0084	502.0052	505.5516	-2.6506
NNNN	40.0000	190.6820	20.8155	.2878	-20.8155	473.8639	501.8170	504.4500	-2.6330
NNNN	41.0000	194.8656	22.4666	1.6373	-22.4666	471.2192	498.3208	500.9458	-2.6250
NNNN	42.0000	204.3987	25.5133	1.0146	-25.5133	467.3379	493.1477	495.7933	-2.6456
NNNN	43.0000	217.0335	29.2804	2.3371	-29.2804	462.6149	487.7377	489.7750	-2.7014
NNNN	44.0000	227.0332	33.0330	3.0122	-33.0330	457.4320	481.7554	483.5156	-2.7502
NNNN	49.0000	264.6058	39.9733	2.9973	-39.9733	436.3141	459.8568	463.1800	-3.3282
NNNN	54.0000	263.1230	41.2624	2.2624	-41.2624	417.2716	442.1560	445.9048	-3.7487
NNNN	59.0000	263.2001	40.8503	1.8503	-40.8503	399.3576	425.6141	429.6621	-4.0481
NNNN	64.0000	263.4473	39.9642	1.9642	-39.9642	382.1791	409.6316	413.8871	-4.2555
NNNN	69.0000	263.6917	38.4470	1.4470	-38.4470	365.3392	393.8903	398.3698	-4.3995
NNNN	74.0000	263.8025	37.6607	1.6607	-37.6607	349.3228	378.5913	383.0917	-4.5004
NNNN	79.0000	261.0300	36.6807	1.6807	-36.6807	333.4520	363.3852	367.9580	-4.5728
NNNN	84.0000	259.9167	35.8402	1.8402	-35.8402	317.8598	348.3415	352.9881	-4.6266
NNNN	89.0000	259.4459	35.1341	1.1341	-35.1341	302.5317	333.4379	338.1062	-4.6683
NNNN	94.0000	259.7948	34.5420	1.5420	-34.5420	287.4017	318.5570	323.3585	-4.7019
NNNN	99.0000	259.0751	34.0479	1.0479	-34.0479	272.4493	303.9818	308.7124	-4.7306
NNNN	104.0000	259.7523	33.2153	1.2153	-33.2153	257.1928	290.9042	295.6186	-4.7146
NNNN	109.0000	259.0350	32.7155	1.7155	-32.7155	242.4670	279.1001	283.7520	-4.6519
NNNN	114.0000	258.8462	32.1596	1.1596	-32.1596	227.8875	268.1756	272.7316	-4.5561
NNNN	119.0000	258.7395	31.7595	1.7595	-31.7595	212.2439	257.9810	262.4202	-4.4393
NNNN	124.0000	258.5796	31.7196	1.7196	-31.7196	210.8196	248.4342	252.7442	-4.3100
NNNN	129.0000	258.2992	31.2191	1.2191	-31.2191	210.2966	239.4789	243.6530	-4.1741
NNNN	134.0000	258.2455	30.8921	1.8921	-30.8921	202.8030	231.0686	235.1036	-4.0350
NNNN	139.0000	258.3013	30.7330	1.7330	-30.7330	195.8730	223.1658	227.0610	-3.8952
NNNN	144.0000	258.5688	30.9164	1.9164	-30.9164	189.4533	215.7374	219.4938	-3.7564
NNNN	149.0000	258.7698	30.7096	1.7096	-30.7096	183.5072	208.7533	212.3727	-3.6194
NNNN	154.0000	258.9841	30.5841	1.5841	-30.5841	177.9805	202.1866	205.6715	-3.4850
NNNN	159.0000	259.0022	30.5627	1.5627	-30.5627	172.8426	196.0120	199.3654	-3.3534
NNNN	164.0000	259.0619	30.5619	1.5619	-30.5619	166.0619	190.2063	193.4314	-3.2252
NNNN	169.0000	259.0608	30.6098	1.6098	-30.6098	160.6098	184.7470	187.8474	-3.1004
NNNN	174.0000	259.0604	30.6004	1.6004	-30.6004	155.4604	179.6131	182.5921	-2.9790
NNNN	179.0000	259.0603	30.5603	1.5603	-30.5603	150.5910	174.7850	177.8463	-2.8613
NNNN	184.0000	259.0603	30.5918	1.5918	-30.5918	145.1981	170.2449	172.9910	-2.7470
NNNN	189.0000	259.0603	30.5989	1.5989	-30.5989	140.6124	165.9735	168.6094	-2.6359
NNNN	194.0000	259.0603	30.5907	1.5907	-30.5907	145.4675	161.9579	164.4861	-2.5282
NNNN	199.0000	259.0603	30.5945	1.5945	-30.5945	142.5308	158.1825	160.6063	-2.4238
NNNN	204.0000	259.0603	30.5911	1.5911	-30.5911	139.7878	154.6334	156.9561	-2.3227
NNNN	209.0000	259.0603	30.5907	1.5907	-30.5907	137.2253	151.2975	153.5225	-2.2250
NNNN	214.0000	259.0603	30.5934	1.5934	-30.5934	134.8309	148.1523	150.2928	-2.1305
NNNN	219.0000	259.0603	30.5939	1.5939	-30.5939	132.5932	145.2161	147.2554	-2.0392
NNNN	224.0000	259.0603	30.5974	1.5974	-30.5974	130.5019	142.4478	144.3990	-1.9512
NNNN	229.0000	259.0603	30.5981	1.5981	-30.5981	128.5462	139.8470	141.7133	-1.8663
NNNN	234.0000	259.0603	30.5984	1.5984	-30.5984	126.7181	137.4036	139.1881	-1.7845
NNNN	239.0000	259.0603	30.5977	1.5977	-30.5977	125.0087	135.1085	136.8142	-1.7057
NNNN	244.0000	259.0603	30.5971	1.5971	-30.5971	123.4100	132.9528	134.5627	-1.6299
NNNN	249.0000	259.0603	30.5968	1.5968	-30.5968	121.9149	130.9282	132.4651	-1.5570
NNNN	254.0000	259.0603	30.5968	1.5968	-30.5968	120.5165	129.0268	130.5137	-1.4869

10x10x10 Inch Tee
 DT Line B

COUPLER NO. 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBN, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TR	DT3
NNNN	259.0000	40.8370	3.0275	-2.4060	-3.0275	119.2083	127.2414	128.6609	-1.4195
NNNN	264.0000	38.2520	2.8287	-2.2600	-2.8287	117.9845	125.5649	126.9198	-1.3549
NNNN	269.0000	35.8315	2.6433	-2.1226	-2.6433	116.8396	123.9908	125.2836	-1.2928
NNNN	274.0000	33.5651	2.4705	-1.9933	-2.4705	115.7683	122.5130	123.7463	-1.2332
NNNN	279.0000	31.4429	2.3092	-1.8717	-2.3092	114.7659	121.1255	122.3018	-1.1761
NNNN	284.0000	29.4557	2.1588	-1.7573	-2.1588	113.8279	119.8232	120.9446	-1.1214
NNNN	289.0000	27.5948	2.0185	-1.6497	-2.0185	112.9500	118.6006	119.6896	-1.0690
NNNN	294.0000	25.8522	1.8874	-1.5486	-1.8874	112.1265	117.4531	118.4718	-1.0188
NNNN	299.0000	24.2203	1.7691	-1.4536	-1.7691	111.3595	116.3759	117.3466	-.9707
NNNN	304.0000	22.6420	1.6509	-1.3643	-1.6509	110.6397	115.3650	116.2696	-.9247

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)

UNITS-BTU, SEC, DEG FAR, LBM, IN

SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
2	259.0000	40.8370	3.0275	-2.4060	-3.0275	119.2083	127.2414	128.6609	-1.4195
2	264.0000	38.2520	2.8287	-2.2600	-2.8287	117.9846	125.5649	126.9198	-1.3549
2	269.0000	35.6315	2.6433	-2.1226	-2.6433	116.8396	123.9908	125.2836	-1.2928
2	274.0000	33.5651	2.4705	-1.9933	-2.4705	115.7683	122.5130	123.7463	-1.2332
2	279.0000	31.4429	2.3092	-1.8717	-2.3092	114.7659	121.1256	122.3018	-1.1761
2	284.0000	29.4557	2.1588	-1.7573	-2.1588	113.8279	119.8232	120.9446	-1.1214
2	289.0000	27.5948	2.0185	-1.6497	-2.0185	112.9500	118.6006	119.6696	-1.0690
2	294.0000	25.8522	1.8874	-1.5466	-1.8874	112.1285	117.4531	118.4718	-1.0188
2	299.0000	24.2203	1.7651	-1.4536	-1.7651	111.3595	116.3759	117.3486	-.9707
2	304.0000	22.6920	1.6509	-1.3643	-1.6509	110.6397	115.3650	116.2696	-.9247

CURRENT EXTREME VALUES ARE

DT1-MAX 319.1527 DT1-MIN -.9133 DT2-MAX 89.5329 DT2-MIN 0.0000 DT3-MAX DT3-MIN -4.7306

10 x 10 x 10 Inch Tee

DT Line B

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL

LOFT LOCE TESTING FOR 10IN TEE (316SST)

UNITS-BTU, SEC, DEG FAR, LBM, IN

SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
3	0.0000	-1.5698	.0076	-.0076	-.0058	609.7159	609.8312	609.6687	-.1625
3	.5000	7.8587	6.3435	6.3435	-2.4138	607.9085	609.9369	607.5091	-1.5722
3	1.0000	19.2104	14.2428	14.2428	-3.5700	605.4157	609.6873	604.5399	-3.6526
3	1.5000	31.8009	22.3131	22.3131	-12.0230	602.5748	604.8556	601.1865	-6.3329
3	2.0000	45.0690	30.1637	30.1637	-12.6214	599.4948	598.6857	597.5941	-8.9084
3	2.5000	52.5319	32.9195	32.9195	-14.4298	597.5714	585.1919	595.4305	-10.2386
3	3.0000	58.2053	34.1681	34.1681	-15.8838	595.9766	582.4904	593.6989	-11.2085
3	3.5000	63.3092	34.9714	34.9714	-16.7735	594.4637	580.0154	592.0885	-12.0731
3	4.0000	68.2104	35.6429	35.6429	-17.7194	592.9993	577.5342	590.9024	-12.9081
3	4.5000	73.0187	36.2746	36.2746	-18.6460	591.4413	575.1732	588.9102	-13.7370
3	5.0000	77.7687	36.8823	36.8823	-19.5635				

COUP MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS1)
 UNITS-BTU, SEC, DEG FAP, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
37	0.0000	-1.5698	6.0076	-1.0076	0.0058	609.7159	609.8312	609.6687	.1625
38	0.0000	7.8287	6.3435	6.3435	-2.4138	607.9095	605.9369	607.5091	-1.5722
39	0.0000	19.2104	14.2428	14.2428	-5.5966	605.4157	603.6873	604.5399	-3.6526
40	0.0000	31.6009	22.3131	22.3131	-9.0530	602.5748	594.8556	601.1865	-6.3329
41	0.0000	45.0890	30.1637	30.1637	-12.6214	599.4948	588.6857	597.2941	-8.9084
42	0.0000	52.5359	32.9195	32.9195	-14.4298	597.5714	585.1919	595.4305	-10.2386
43	0.0000	58.2053	34.1681	34.1681	-15.6836	595.9766	582.4904	593.6989	-11.2085
44	0.0000	63.3092	34.9714	34.9714	-16.7433	594.4637	580.0154	592.0885	-12.0731
45	0.0000	68.2104	35.6429	35.6429	-17.7194	592.9593	577.5942	590.5024	-12.9081
46	0.0000	73.0187	36.2746	36.2746	-18.6460	591.4413	575.1732	588.9102	-13.7370
47	0.0000	77.7667	36.8932	36.8932	-19.5356	589.9034	572.7351	587.3023	-14.5672
48	0.0000	82.4721	37.5060	37.5060	-20.3937	588.3434	570.2747	585.6755	-15.4008
49	0.0000	87.1338	38.1145	38.1145	-21.2233	586.7609	567.7903	584.0289	-16.2386
50	0.0000	91.7561	38.7191	38.7191	-22.0275	585.1555	565.2816	582.3619	-17.0802
51	0.0000	96.3408	39.3193	39.3193	-22.8079	583.5274	562.7488	580.6743	-17.9255
52	0.0000	100.8731	44.6514	44.6514	-23.5607	580.5335	557.2916	577.3593	-20.0677
53	0.0000	120.1054	51.1506	51.1506	-28.4565	577.0119	553.8113	573.4276	-22.6164
54	0.0000	133.9155	57.7816	57.7816	-31.7546	573.2104	543.8836	569.1976	-25.3140
55	0.0000	144.1945	64.2550	64.2550	-35.1071	569.2269	535.6498	564.7725	-28.0827
56	0.0000	162.7990	70.5004	70.5004	-38.4824	565.0713	529.2911	560.1886	-30.8975
57	0.0000	177.6676	76.5113	76.5113	-41.8632	560.7612	521.7111	555.4601	-33.7490
58	0.0000	192.7591	82.2972	82.2972	-45.2390	556.3041	513.9825	550.5953	-36.6329
59	0.0000	205.0423	87.7722	87.7722	-48.6023	551.7059	505.0537	545.6004	-39.5467
60	0.0000	223.4918	93.2513	93.2513	-51.9476	546.9715	497.9911	540.4802	-42.4891
61	0.0000	239.0635	98.4487	98.4487	-55.2705	542.1054	489.7808	535.2391	-45.4583
62	0.0000	254.7967	103.4777	103.4777	-58.5674	537.1121	481.4282	529.8811	-48.4529
63	0.0000	270.6122	108.3506	108.3506	-61.8352	531.9953	472.9375	524.4100	-51.4721
64	0.0000	276.8240	99.5601	99.5601	-61.0407	526.9506	467.1160	519.7591	-52.6431
65	0.0000	258.0166	75.3927	75.3927	-53.3705	527.3399	471.1765	521.2916	-50.1153
66	0.0000	242.0527	57.6203	57.6203	-46.9485	527.3604	473.8678	522.2660	-46.3982
67	0.0000	228.3160	44.5220	44.5220	-41.5543	527.1057	475.5785	522.8136	-47.2351
68	0.0000	216.3521	37.0113	37.0113	-37.0113	526.6428	476.5845	523.0332	-46.4487
69	0.0000	205.8173	27.1771	27.1771	-33.1771	526.0196	477.0821	522.9987	-45.9165
70	0.0000	196.4507	23.5353	23.5353	-29.9353	525.2712	477.2114	522.7660	-45.5545
71	0.0000	188.0524	27.1905	27.1905	-27.1905	524.4232	477.2727	522.3775	-45.3047
72	0.0000	180.4673	24.6636	24.6636	-24.6636	523.4949	476.7382	521.8657	-45.1274
73	0.0000	173.5744	22.8688	22.8688	-22.8688	522.5009	476.2600	521.2656	-44.9956
74	0.0000	167.2774	21.2110	21.2110	-21.2110	521.4527	475.6756	520.5667	-44.8911
75	0.0000	161.4991	19.7542	19.7542	-19.7542	520.3593	475.0125	519.8143	-44.8018
76	0.0000	156.1768	18.5317	18.5317	-18.5317	519.2282	474.2905	519.0102	-44.7197
77	0.0000	151.2587	17.5343	17.5343	-17.5343	518.0655	473.5242	518.1640	-44.6398
78	0.0000	146.7017	16.6511	16.6511	-16.6511	516.8763	472.7245	517.2835	-44.5590
79	0.0000	142.4695	15.8964	15.8964	-15.8964	515.6651	471.8991	516.3747	-44.4756
80	0.0000	138.5310	15.2507	15.2507	-15.2507	514.4356	471.0530	515.4426	-44.3887
81	0.0000	134.6593	14.6972	14.6972	-14.6972	513.1916	470.1933	514.4913	-44.2980
82	0.0000	131.4310	14.2220	14.2220	-14.2220	511.9355	469.3206	513.5242	-44.2036
83	0.0000	128.2258	13.8130	13.8130	-13.8130	510.6702	468.4382	512.5441	-44.1059
84	0.0000	125.2253	13.4601	13.4601	-13.4601	509.3977	467.5479	511.5532	-44.0053
85	0.0000	122.4134	13.1549	13.1549	-13.1549	508.1203	466.6513	510.5536	-43.9023
86	0.0000	119.7756	12.8901	12.8901	-12.8901	506.8396	465.7493	509.5467	-43.7974

10 x 10 x 10 Inch Tee
 DT Line C

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS1)
 UNITS-BTU, SEC, DEG FAP, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
37	0.0000	117.2987	12.6596	8.4651	-12.6596	505.5571	464.8429	508.5341	-43.6912
38	0.0000	114.9708	12.4582	8.5413	-12.4582	504.2744	463.9328	507.5168	-43.5840
39	0.0000	112.7813	12.2816	8.6309	-12.2816	502.9924	463.0194	506.4958	-43.4764
40	0.0000	110.7201	12.1260	8.7217	-12.1260	501.7123	462.1032	505.4719	-43.3687
41	0.0000	118.5208	15.5386	15.5386	-14.7100	498.2838	457.3534	501.9145	-44.5610
42	0.0000	132.7840	25.6506	25.6506	-18.9580	493.3243	450.0494	496.5668	-46.5175
43	0.0000	150.0869	36.2385	36.2385	-23.6352	487.5076	441.4758	490.2348	-48.7592
44	0.0000	167.7527	45.4989	45.4989	-28.5719	481.3848	432.5263	483.5815	-50.9552
45	0.0000	201.8158	49.7377	49.7377	-35.0259	460.0008	406.8459	462.6288	-55.3769
46	0.0000	217.7091	46.6917	46.6917	-36.4340	441.5433	386.0156	444.0453	-58.0397
47	0.0000	225.8575	43.2966	43.2966	-36.2881	424.2975	367.4547	427.4136	-59.9589

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DISET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
37	0000	117.2987	12.65596	8.45551	-12.65596	505.55571	464.8429	508.5341	-43.6912
38	0000	114.9708	12.45682	8.54133	-12.45682	504.2744	463.9328	507.5168	-43.5840
39	0000	112.7813	12.2816	8.6309	-12.2816	502.9924	463.0194	506.4958	-43.4764
40	0000	110.7201	12.1260	8.7217	-12.1260	501.7123	462.1032	505.4719	-43.3687
41	0000	118.5203	13.5386	15.5386	-14.7100	498.2838	457.3634	501.9145	-44.5610
42	0000	132.7883	23.6506	23.6506	-18.95880	493.3243	450.0494	496.5668	-46.5175
43	0000	150.0869	36.2385	36.2385	-23.8352	487.5076	441.4756	490.2348	-48.7592
44	0000	167.7527	45.4989	45.4989	-28.5719	481.3848	432.6263	483.5615	-50.9552
49	0000	201.8158	49.7377	49.7377	-35.0259	460.0008	406.6499	462.0288	-55.3789
54	0000	217.7091	46.6917	46.6917	-36.4340	441.5433	386.0756	444.0453	-58.0397
59	0000	225.8575	43.2936	43.2936	-36.2881	424.2975	367.4547	427.4136	-59.9589
64	0000	230.0122	40.6561	40.6561	-35.6965	407.6989	350.0283	411.4373	-61.4090
69	0000	231.8834	38.7373	38.7373	-35.0416	391.5103	333.3433	395.6499	-62.5066
74	0000	232.3894	37.3544	37.3544	-34.4380	375.6212	317.2006	380.5257	-63.3251
79	0000	232.0757	36.3474	36.3474	-33.9176	359.9714	301.4731	365.4018	-63.9288
84	0000	231.2810	35.7010	35.7010	-33.4779	344.5228	286.0714	350.4405	-64.3691
89	0000	230.2201	35.0356	35.0356	-33.1058	329.2490	270.9295	335.6157	-64.6861
94	0000	229.0305	34.5988	34.5988	-32.7902	314.1298	255.9975	320.9077	-64.9102
99	0000	227.8020	34.2595	34.2595	-32.5244	299.1449	241.2373	306.3001	-65.0628
104	0000	221.5353	31.6460	31.6460	-31.0782	283.6493	229.1419	293.2613	-64.1394
109	0000	212.2281	29.1009	29.1009	-29.1009	273.4177	218.8097	281.5358	-62.5361
114	0000	201.8087	27.0951	27.0951	-27.0951	262.1158	210.0561	270.6649	-60.6088
119	0000	191.0464	25.1988	25.1988	-25.1988	251.6639	202.9202	260.5138	-58.4936
124	0000	180.3231	23.4449	23.4449	-23.4449	241.8009	194.7317	250.9977	-56.2660
129	0000	169.8463	21.8543	21.8543	-21.8543	232.6466	188.0803	242.0601	-53.9798
134	0000	159.7423	20.3553	20.3553	-20.3553	224.0930	181.9828	233.6556	-51.6728
139	0000	150.0820	18.9937	18.9937	-18.9937	216.0985	176.3734	225.7474	-49.3740
144	0000	140.8999	17.7363	17.7363	-17.7363	208.6259	171.1983	218.3040	-47.1057
149	0000	132.2076	16.5721	16.5721	-16.5721	201.6408	166.4130	211.2961	-44.8831
154	0000	124.0029	15.4414	15.4414	-15.4414	195.1111	161.9798	204.6980	-42.7182
159	0000	116.2741	14.4861	14.4861	-14.4861	189.0065	157.8663	198.4858	-40.6194
164	0000	109.0040	13.5491	13.5491	-13.5491	183.2984	154.0446	192.6370	-38.5923
169	0000	102.1718	12.6750	12.6750	-12.6750	177.9606	150.4901	187.1305	-36.6404
174	0000	95.7533	11.8596	11.8596	-11.8596	172.9678	147.1811	181.9457	-34.7646
179	0000	89.7269	11.0986	11.0986	-11.0986	168.2974	144.0983	177.0639	-32.9656
184	0000	84.0721	10.3878	10.3878	-10.3878	163.9284	141.2246	172.4668	-31.2423
189	0000	78.7683	9.7236	9.7236	-9.7236	159.8413	138.5445	168.1384	-29.5938
194	0000	73.7956	9.1026	9.1026	-9.1026	156.0177	136.0440	164.0633	-28.0193
199	0000	69.1344	8.5219	8.5219	-8.5219	152.4406	133.7131	160.2274	-26.5173
204	0000	64.7661	7.9788	7.9788	-7.9788	149.0939	131.5311	156.6171	-25.0859
209	0000	60.6729	7.4767	7.4767	-7.4767	145.9627	129.4962	153.2195	-23.7233
214	0000	56.8379	6.9952	6.9952	-6.9952	143.0329	127.5954	150.0225	-22.4272
219	0000	53.2450	6.5504	6.5504	-6.5504	140.2915	125.8194	147.0147	-21.1953
224	0000	49.8794	6.1341	6.1341	-6.1341	137.7262	124.1599	144.1852	-20.0253
229	0000	46.7266	5.7445	5.7445	-5.7445	135.3256	122.6089	141.5236	-18.9148
234	0000	43.7735	5.3748	5.3748	-5.3748	133.0791	121.1591	139.0204	-17.6613
239	0000	41.0074	5.0385	5.0385	-5.0385	130.9766	119.8036	136.6662	-16.8626
244	0000	38.4161	4.7191	4.7191	-4.7191	129.0089	118.5363	134.4525	-15.9162
249	0000	35.9897	4.4200	4.4200	-4.4200	127.1672	117.3513	132.3710	-15.0197
254	0000	33.7168	4.1401	4.1401	-4.1401	125.4434	116.2430	130.4140	-14.1710

10x10x10 Inch Tee
 DT Line C

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DISET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
303	259.0000	31.5879	3.8780	3.8780	-3.8780	123.8298	115.2064	129.5742	-13.3678
303	264.0000	29.5939	3.6326	3.6326	-3.6326	122.3194	114.2368	126.6447	-12.6079
303	269.0000	27.7262	3.4029	3.4029	-3.4029	120.9055	113.3298	125.2190	-11.8892
303	274.0000	25.9770	3.1878	3.1878	-3.1878	119.5819	112.4812	123.6910	-11.2098
303	279.0000	24.3385	2.9864	2.9864	-2.9864	118.3427	111.6373	122.2549	-10.5676
303	284.0000	22.8039	2.7979	2.7979	-2.7979	117.1825	110.9444	120.9052	-9.9608
303	289.0000	21.3664	2.6213	2.6213	-2.6213	116.0962	110.2493	119.6368	-9.3876
303	294.0000	20.0200	2.4559	2.4559	-2.4559	115.0792	109.5987	118.4450	-8.8462
303	299.0000	18.7588	2.3011	2.3011	-2.3011	114.1269	108.9899	117.3250	-8.3351
303	304.0000	17.5775	2.1561	2.1561	-2.1561	113.2351	108.4201	116.2727	-7.8526

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SST)

UNITS-BTU, SEC, DEG FAR, CM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
3	259.0000	3.5879	3.6780	3.1981	-3.6780	123.8298	115.2064	128.5742	-13.3678
3	264.0000	3.5939	3.6326	2.9933	-3.6326	122.3194	114.2368	126.8447	-12.6079
3	269.0000	27.7262	3.4029	2.5018	-3.4029	120.9055	113.3298	125.2190	-11.6892
3	274.0000	23.9770	3.1878	2.6228	-3.1878	119.5619	112.4812	123.0910	-11.2098
3	279.0000	24.3313	2.5664	2.4554	-2.9864	118.3427	111.6873	122.2549	-10.5676
3	284.0000	22.8039	2.7979	2.2968	-2.7979	117.1825	110.8444	120.9052	-9.9608
3	289.0000	21.3664	2.6213	2.1524	-2.6213	116.0962	110.2493	119.6368	-9.3876
3	294.0000	23.0200	2.4559	2.0154	-2.4559	115.0792	109.5987	118.4450	-8.8462
3	299.0000	13.7568	2.3011	1.8673	-2.3011	114.1269	108.9899	117.3250	-8.3351
3	304.0000	17.5775	2.1561	1.7674	-2.1561	113.2321	108.4201	116.2727	-7.8526

CURRENT EXTREME VALUES
 DT1-MAX 276.8240 DT1-MIN -1.5698 DT2-MAX 108.3506 DT2-MIN -65.0628

10x10x10 Inch Tee
 DT Line C

A-17

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

10x10x10 Inch Tee

DT Line D

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	T8	DT3
1	.5000	6.9821	10.9242	10.9242	-2.2054	607.6857	607.9700	607.9833	-.0133
1	1.0000	14.6368	22.9579	22.9579	-4.6344	606.2356	606.7247	606.7544	-.0297
1	1.5000	22.4394	35.1122	35.1122	-7.0916	604.7664	605.3683	605.4156	-.0473
1	2.0000	30.3369	47.3251	47.3251	-9.5670	603.2836	603.9238	603.9888	-.0650
1	2.5000	32.7259	50.8894	50.8894	-10.3202	602.8312	603.2208	603.2928	-.0720
1	3.0000	34.8953	54.0879	54.0879	-11.0089	602.4144	602.5783	602.6546	-.0763
1	3.5000	37.0592	57.2198	57.2198	-11.6934	601.9972	601.9611	602.0399	-.0788
1	4.0000	37.2315	60.3069	60.3069	-12.3778	601.5769	601.3597	601.4397	-.0800
1	4.5000	41.4170	63.3577	63.3577	-13.0640	601.1527	600.7680	600.8481	-.0801
1	5.0000	43.6188	66.3783	66.3783	-13.7529	600.7239	600.1818	600.2611	-.0793
1	5.5000	45.8387	69.3736	69.3736	-14.4452	600.2902	599.5980	599.6759	-.0779
1	6.0000	48.0776	72.3462	72.3462	-15.1413	599.8516	599.0144	599.0904	-.0760
1	6.5000	50.3360	75.2985	75.2985	-15.8414	599.4078	598.4295	598.5032	-.0736
1	7.0000	52.6141	78.2324	78.2324	-16.5457	598.9589	597.8422	597.9131	-.0709
1	7.5000	60.4140	89.7390	89.7390	-18.9734	597.4732	596.4464	596.5246	-.0782
1	8.0000	68.4843	101.6080	101.6080	-21.4833	595.9350	594.9256	595.0128	-.0872
1	8.5000	76.6345	113.5338	113.5338	-24.0158	594.3793	593.3218	593.4185	-.0967
1	9.0000	84.8511	125.4868	125.4868	-26.5663	592.8099	591.5498	591.7559	-.1061
1	9.5000	93.1297	137.4521	137.4521	-29.1333	591.2258	589.9198	590.0348	-.1151
1	10.0000	101.4680	149.4186	149.4186	-31.7158	589.6279	588.1393	588.2626	-.1233
1	10.5000	109.8649	161.3778	161.3778	-34.3134	588.0160	586.3139	586.4445	-.1306
1	11.0000	118.3203	173.3238	173.3238	-36.9259	586.3901	584.4479	584.5848	-.1369
1	11.5000	126.8342	185.2514	185.2514	-39.5530	584.7498	582.5444	582.6865	-.1421
1	12.0000	135.4070	197.1569	197.1569	-42.1948	583.0951	580.6061	580.7522	-.1461
1	12.5000	144.0390	209.0373	209.0373	-44.8512	581.4257	578.6350	578.7839	-.1489
1	13.0000	152.7307	220.8904	220.8904	-47.5224	579.7414	576.6326	576.7832	-.1505
1	14.0000	161.4821	232.7214	232.7214	-50.2045	578.0444	575.5220	575.6341	-.1520
1	15.0000	170.2978	244.5266	244.5266	-52.8933	576.3338	574.4554	574.5357	-.1537
1	16.0000	179.1691	256.2959	256.2959	-55.5879	574.6093	573.3578	573.4256	-.1551
1	17.0000	188.0931	268.0282	268.0282	-58.2880	572.8750	572.2588	572.3108	-.1560
1	18.0000	197.0655	279.7212	279.7212	-60.9925	571.1384	571.1184	571.1719	-.1562
1	19.0000	206.0815	291.3798	291.3798	-63.7007	569.3936	569.9972	570.5536	-.1552
1	20.0000	215.1453	303.0070	303.0070	-66.4124	567.6444	568.6809	569.2316	-.1533
1	21.0000	224.2611	314.6078	314.6078	-69.1279	565.8936	566.8099	567.2786	-.1501
1	22.0000	233.4237	326.1759	326.1759	-71.8474	564.1436	564.9298	565.3437	-.1458
1	23.0000	242.6371	337.7153	337.7153	-74.5709	562.3936	563.1495	563.4485	-.1401
1	24.0000	251.9053	349.2298	349.2298	-77.2984	560.6436	561.8728	562.0883	-.1331
1	25.0000	261.2315	360.7212	360.7212	-80.0309	558.8936	559.5228	559.6344	-.1248
1	26.0000	270.6097	372.1924	372.1924	-82.7684	557.1436	557.7532	557.8349	-.1151
1	27.0000	280.0431	383.6378	383.6378	-85.5109	555.3936	555.9650	556.0158	-.1041
1	28.0000	289.5253	395.0512	395.0512	-88.2584	553.6436	554.3415	554.3619	-.0911
1	29.0000	299.0611	406.4378	406.4378	-91.0109	551.8936	552.5860	552.6364	-.0761
1	30.0000	308.6553	417.7924	417.7924	-93.7684	550.1436	550.8313	550.8821	-.0591
1	31.0000	318.3097	429.1212	429.1212	-96.5309	548.3936	549.0772	549.1209	-.0401
1	32.0000	328.0281	440.4266	440.4266	-99.2984	546.6436	547.3224	547.3545	-.0191
1	33.0000	337.8053	451.7098	451.7098	-102.0709	544.8936	545.5110	545.5180	-.0001
1	34.0000	347.6431	462.9724	462.9724	-104.8484	543.1436	544.1663	544.1605	-.0191
1	35.0000	357.5353	474.2198	474.2198	-107.6309	541.3936	542.6593	542.6437	-.0401
1	36.0000	367.4853	485.4478	485.4478	-110.4184	539.6436	541.1403	541.1151	-.0611
1	37.0000	377.4953	496.6512	496.6512	-113.2109	537.8936	539.6201	539.5833	-.0821

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SS)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	T8	DT3
1	38.0000	98.5167	75.1442	75.1442	-28.1691	587.1100	579.7488	579.2986	.4503
1	39.0000	99.3919	74.8668	74.8668	-28.3141	586.8619	579.3770	578.9182	.4587
1	40.0000	100.1446	74.6104	74.6104	-28.4580	586.6140	579.0047	578.5375	.4671
1	41.0000	119.0291	102.5985	102.5985	-34.2621	582.9654	575.7606	575.3258	.4348
1	42.0000	136.6552	128.4720	128.4720	-39.6708	579.5453	572.3288	571.9266	.4022
1	43.0000	150.5674	148.2684	148.2684	-43.9045	576.8182	569.2481	568.8664	.3817
1	44.0000	161.3742	162.9497	162.9497	-47.1825	574.6626	566.5577	566.1839	.3739
1	45.0000	179.4568	175.8390	175.8390	-50.0561	570.4627	562.7110	562.2347	.3763
1	46.0000	194.8863	182.4783	182.4783	-52.0896	566.8461	558.8102	558.2695	.3807
1	47.0000	209.3957	187.1312	187.1312	-53.6571	562.8772	554.8350	554.2577	.3873
1	48.0000	223.9059	190.9217	190.9217	-54.1150	559.1094	542.8416	541.9890	.3925
1	49.0000	238.4161	194.7122	194.7122	-54.5729	555.3417	537.3788	536.4022	.3973

COUP MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SSST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TB	DT3
1	38.0000	98.8167	75.1442	75.1442	-28.1691	587.1103	579.7488	579.2986	.4503
1	39.0000	99.3819	74.8663	74.8668	-28.3141	586.8519	579.3770	576.9182	.4587
1	40.0000	100.1446	74.6104	74.6104	-28.4580	586.6140	579.0047	578.5375	.4671
1	41.0000	119.0291	102.5985	102.5985	-34.2621	582.9654	575.7606	575.3258	.4348
1	42.0000	136.6562	128.4720	128.4720	-39.6708	579.5453	572.3285	571.9286	.4022
1	43.0000	150.5674	148.2684	148.2684	-43.9045	576.8182	569.2481	568.8664	.3817
1	44.0000	161.3742	162.9497	162.9497	-47.1625	574.6626	568.5577	566.1639	.3739
1	49.0000	179.4568	175.8390	175.8390	-52.0961	570.4527	559.7110	559.2347	.4763
1	54.0000	194.8803	182.4785	182.4785	-56.0098	566.6461	553.8702	553.2695	.6007
1	59.0000	204.5957	187.1312	187.1312	-59.6571	562.6772	548.3150	547.5877	.7273
1	64.0000	223.9059	190.9217	190.9217	-63.1150	559.1094	542.8416	541.9890	.8525
1	69.0000	237.9012	194.2830	194.2830	-66.4200	555.3343	537.3795	536.4032	.9763
1	74.0000	251.6192	197.4137	197.4137	-69.5909	551.5487	531.9020	530.6030	1.0989
1	79.0000	265.0885	200.4155	200.4155	-72.6419	547.7493	526.3972	525.1763	1.2209
1	84.0000	273.3326	203.3454	203.3454	-75.5849	543.9324	520.8595	519.5188	1.3427
1	89.0000	291.3730	206.2364	206.2364	-78.4304	540.0944	515.2848	513.8202	1.4646
1	94.0000	304.2277	209.1074	209.1074	-81.1877	536.2317	509.6707	508.0839	1.5868
1	99.0000	316.9115	211.9698	211.9698	-83.8645	532.3411	504.0151	502.3056	1.7093
1	104.0000	325.9243	209.6371	209.6371	-85.3791	529.0867	499.0159	497.1731	1.8378
1	109.0000	333.3432	205.5946	205.5946	-86.3915	526.0871	494.3665	492.4017	1.9648
1	114.0000	340.0877	201.3913	201.3913	-87.1977	523.1742	489.8829	487.7956	2.0873
1	119.0000	346.2613	197.2154	197.2154	-87.8363	520.3311	483.5264	483.3214	2.2050
1	124.0000	351.9165	193.1327	193.1327	-88.3283	517.5496	481.2795	478.9612	2.3183
1	129.0000	357.0946	189.1710	189.1710	-88.6906	514.8224	477.1317	474.7042	2.4275
1	134.0000	361.8324	185.3427	185.3427	-88.9385	512.1434	473.0753	470.5424	2.5329
1	139.0000	366.1602	181.6503	181.6503	-89.0841	509.5068	469.1039	466.4692	2.6347
1	144.0000	370.1068	178.0931	178.0931	-89.1390	506.9075	465.2120	462.4791	2.7330
1	149.0000	373.6973	174.6679	174.6679	-89.1135	504.3408	461.3949	458.5671	2.8278
1	154.0000	376.9563	171.3702	171.3702	-89.0168	501.6025	457.6483	454.7289	2.9194
1	159.0000	379.9033	168.1946	168.1946	-88.8570	499.2887	453.9682	450.9605	3.0077
1	164.0000	382.5981	165.1356	165.1356	-88.6415	496.7962	450.3512	447.2885	3.0926
1	169.0000	384.9381	162.1876	162.1876	-88.3787	494.3219	446.7941	443.6195	3.1746
1	174.0000	387.0593	159.3452	159.3452	-88.0686	491.8633	443.2942	440.0408	3.2534
1	179.0000	388.9366	156.6029	156.6029	-87.7222	489.4180	439.8486	436.5198	3.3289
1	184.0000	390.5638	153.9556	153.9556	-87.3424	486.9840	436.4555	433.0541	3.4014
1	189.0000	392.0137	151.3983	151.3983	-86.9331	484.5596	433.1124	429.6417	3.4707
1	194.0000	393.2363	148.9261	148.9261	-86.4981	482.1433	429.8174	426.2504	3.5370
1	199.0000	394.2689	146.5345	146.5345	-86.0408	479.7337	426.5689	422.9686	3.6003
1	204.0000	395.1160	144.2192	144.2192	-85.5641	477.3297	423.3651	419.7044	3.6607
1	209.0000	395.7896	141.9763	141.9763	-85.0705	474.9306	420.2046	416.4665	3.7181
1	214.0000	396.2989	139.8020	139.8020	-84.5625	472.5354	417.0860	413.3134	3.7725
1	219.0000	396.6528	137.6927	137.6927	-84.0420	470.1436	414.0080	410.1839	3.8241
1	224.0000	396.8595	135.6450	135.6450	-83.5110	467.7548	410.9694	407.0966	3.8726
1	229.0000	396.9264	133.6559	133.6559	-82.9709	465.3685	407.9693	404.0565	3.9188
1	234.0000	396.8624	131.7224	131.7224	-82.4233	462.9845	405.0066	401.0446	3.9620
1	239.0000	396.6730	129.8417	129.8417	-81.8695	460.6028	402.0802	398.0777	4.0025
1	244.0000	396.3654	128.0113	128.0113	-81.3105	458.2231	399.1894	395.1489	4.0405
1	249.0000	395.9460	126.2287	126.2287	-80.7474	455.8455	396.3333	392.2574	4.0759
1	254.0000	395.4206	124.4915	124.4915	-80.1810	453.4699	393.5111	389.4023	4.1088
1	259.0000	394.7954	122.7976	122.7976	-79.6121	451.0966	390.7219	386.5827	4.1392

10x10x10 Inch Tee

DT Line D

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 10IN TEE (316SSST)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TB	DT3
1	264.0000	394.0753	121.1452	121.1452	-79.0414	448.7256	387.9653	383.7981	4.1672
1	269.0000	393.2656	119.5324	119.5324	-78.4696	446.3572	385.2404	381.0475	4.1928
1	274.0000	392.3711	117.9573	117.9573	-77.8971	443.9916	382.5466	378.3304	4.2162
1	279.0000	391.3963	116.4183	116.4183	-77.3244	441.6289	379.8835	375.6461	4.2374
1	284.0000	390.3456	114.9139	114.9139	-76.7519	439.2696	377.2503	372.9938	4.2565
1	289.0000	389.2231	113.4425	113.4425	-76.1800	436.9138	374.6465	370.3730	4.2735
1	294.0000	388.0329	112.0028	112.0028	-75.6090	434.5618	372.0716	367.7831	4.2885
1	299.0000	386.7788	110.5935	110.5935	-75.0392	432.2140	369.5251	365.2236	4.3015
1	304.0000	385.4642	109.2134	109.2134	-74.4703	429.8707	367.0055	362.6938	4.3127
1	309.0000	384.0926	107.8613	107.8613	-73.9041	427.5322	364.5153	360.1932	4.3221
1	314.0000	382.6672	106.5362	106.5362	-73.3392	425.1983	362.0510	357.7213	4.3297

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR LOIN TEE (316SS)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1
 DTSET TIME DT1 DT2 DT2I DT2O TAVE TA TB DT3

1	264.0000	394.0753	121.1452	121.1452	-79.0414	448.7256	387.9653	383.7981	4.1672
1	269.0000	393.2556	117.5324	119.5324	-78.4696	446.3272	385.2404	381.0475	4.1928
1	274.0000	392.3711	117.9573	117.9573	-77.8971	443.9916	382.5466	378.3304	4.2162
1	279.0000	391.3963	116.4183	116.4183	-77.3244	441.6289	379.8835	375.6461	4.2374
1	284.0000	390.3456	114.9139	114.9139	-76.7519	439.2696	377.2503	372.9938	4.2565
1	289.0000	389.2231	113.4425	113.4425	-76.1800	436.9138	374.6465	370.3730	4.2735
1	294.0000	388.0324	112.0028	112.0028	-75.6090	434.5618	372.0716	367.7831	4.2885
1	299.0000	386.7788	110.5935	110.5935	-75.0392	432.2140	369.5251	365.2236	4.3015
1	304.0000	385.4642	109.2134	109.2134	-74.4708	429.8707	367.0085	362.6936	4.3127
1	309.0000	384.0926	107.8613	107.8613	-73.9041	427.5322	364.5153	360.1932	4.3221
1	314.0000	382.6672	106.5362	106.5362	-73.3392	425.1988	362.0510	357.7213	4.3297
1	319.0000	381.1910	105.2371	105.2371	-72.7764	422.8708	359.6133	355.2776	4.3357
1	324.0000	379.6570	103.9630	103.9630	-72.2157	420.5486	357.2016	352.8617	4.3399
1	329.0000	378.0480	102.7129	102.7129	-71.6574	418.2324	354.8157	350.4730	4.3427
1	334.0000	376.4666	101.4862	101.4862	-71.1015	415.9226	352.4549	348.1111	4.3439
1	339.0000	374.8353	100.2819	100.2819	-70.5481	413.6199	350.1191	345.7755	4.3436
1	344.0000	373.1466	99.0992	99.0992	-69.9973	411.3234	347.8078	343.4658	4.3420
1	349.0000	371.4226	97.9375	97.9375	-69.4493	409.0345	345.5206	341.1816	4.3390
1	354.0000	369.6557	96.7962	96.7962	-68.9040	406.7531	343.2571	338.9225	4.3347
1	359.0000	367.8777	95.6744	95.6744	-68.3614	404.4796	341.0171	336.6681	4.3291
1	364.0000	366.0606	94.5718	94.5718	-67.8218	402.2142	338.8002	334.4779	4.3223
1	369.0000	364.2164	93.4876	93.4876	-67.2851	399.9572	336.6061	332.2917	4.3144
1	374.0000	362.3469	92.4214	92.4214	-66.7513	397.7067	334.4344	330.1291	4.3053
1	379.0000	360.4536	91.3726	91.3726	-66.2205	395.4691	332.2848	327.9896	4.2952
1	384.0000	358.5383	90.3407	90.3407	-65.6927	393.2385	330.1571	325.8730	4.2842
1	389.0000	356.6025	89.3253	89.3253	-65.1679	391.0173	328.0509	323.7788	4.2721
1	394.0000	354.6477	88.3258	88.3258	-64.6462	388.8055	325.9659	321.7068	4.2591
1	399.0000	352.6752	87.3418	87.3418	-64.1276	386.6034	323.9019	319.6567	4.2452
1	404.0000	350.6864	86.3730	86.3730	-63.6121	384.4111	321.8586	317.6281	4.2305
1	409.0000	348.6826	85.4190	85.4190	-63.0997	382.2290	319.8356	315.6207	4.2150
1	414.0000	346.6549	84.4793	84.4793	-62.5904	380.0571	317.8328	313.6342	4.1987
1	419.0000	344.6344	83.5536	83.5536	-62.0843	377.8955	315.8499	311.6683	4.1816
1	424.0000	342.5923	82.6417	82.6417	-61.5815	375.7445	313.8867	309.7227	4.1639
1	429.0000	340.5396	81.7432	81.7432	-61.0819	373.6042	311.9428	307.7972	4.1456
1	434.0000	338.4770	80.8577	80.8577	-60.5857	371.4746	310.0180	305.8914	4.1266
1	439.0000	336.4058	79.9851	79.9851	-60.0930	369.3560	308.1121	304.0050	4.1071
1	444.0000	334.3259	79.1249	79.1249	-59.6035	367.2485	306.2249	302.1379	4.0870
1	449.0000	332.2412	78.2769	78.2769	-59.1175	365.1522	304.3560	300.2897	4.0663
1	454.0000	330.1496	77.4408	77.4408	-58.6347	363.0672	302.5054	298.4602	4.0452
1	459.0000	328.0531	76.6162	76.6162	-58.1552	360.9937	300.6728	296.6492	4.0236
1	464.0000	325.9523	75.8030	75.8030	-57.6791	358.9316	298.8579	294.8564	4.0015
1	469.0000	323.8461	75.0010	75.0010	-57.2062	356.8813	297.0606	293.0815	3.9791
1	474.0000	321.7411	74.2099	74.2099	-56.7366	354.8426	295.2606	291.3243	3.9562
1	479.0000	319.6320	73.4294	73.4294	-56.2702	352.8158	293.5177	289.5647	3.9330
1	484.0000	317.5216	72.6594	72.6594	-55.8070	350.8009	291.7718	287.8623	3.9095
1	489.0000	315.4105	71.8996	71.8996	-55.3471	348.7979	290.0426	286.1570	3.8857
1	494.0000	313.2993	71.1497	71.1497	-54.8904	346.8069	288.3300	284.4685	3.8615
1	499.0000	311.1886	70.4097	70.4097	-54.4369	344.8280	286.6337	282.7966	3.8371
1	504.0000	309.0789	69.6792	69.6792	-53.9866	342.8613	284.9536	281.1411	3.8125
1	509.0000	306.9708	68.9581	68.9581	-53.5395	340.9067	283.2894	279.5018	3.7876

10x10x10 Inch Tee
 DT Line D

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR LOIN TEE (316SS)
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1
 DTSET TIME DT1 DT2 DT2I DT2O TAVE TA TB DT3

1	514.0000	304.8648	68.2463	68.2463	-53.0956	338.9643	281.6410	277.8785	3.7625
1	519.0000	302.7614	67.5434	67.5434	-52.6549	337.0341	280.0083	276.2711	3.7372
1	524.0000	300.6610	66.8495	66.8495	-52.2172	335.1162	278.3910	274.6792	3.7117
1	529.0000	298.5640	66.1642	66.1642	-51.7828	333.2106	276.7889	273.1028	3.6861
1	534.0000	296.4708	65.4875	65.4875	-51.3514	331.3173	275.2020	271.5416	3.6604
1	539.0000	294.3819	64.8192	64.8192	-50.9231	329.4364	273.6299	269.9954	3.6345
1	544.0000	292.2976	64.1591	64.1591	-50.4979	327.5678	272.0726	268.4641	3.6085
1	549.0000	290.2183	63.5072	63.5072	-50.0758	325.7116	270.5299	266.9475	3.5824
1	554.0000	288.1443	62.8632	62.8632	-49.6567	323.8677	269.0016	265.4454	3.5562
1	559.0000	286.0759	62.2269	62.2269	-49.2407	322.0361	267.4876	263.9576	3.5300
1	564.0000	284.0135	61.5984	61.5984	-48.8277	320.2169	265.9878	262.4841	3.5037
1	569.0000	281.9561	60.9761	60.9761	-48.4177	318.4100	264.5011	261.0248	3.4772

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 10IN TEE (316SST)

UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2O	TAVE	TA	TB	DT3
1	514.0000	304.8648	66.2463	66.2463	-53.0956	338.9643	281.6410	277.8785	3.7625
1	519.0000	302.7614	67.5434	67.5434	-52.6549	337.0341	280.0083	276.2711	3.7372
1	524.0000	300.8610	66.8445	66.8445	-52.2172	335.1162	278.3910	274.6792	3.7117
1	529.0000	298.5540	66.1642	66.1642	-51.7828	333.2106	276.7889	273.1028	3.6861
1	534.0000	296.4708	65.4675	65.4675	-51.3514	331.3173	275.2020	271.5416	3.6604
1	539.0000	294.3819	64.8192	64.8192	-50.9231	329.4364	273.6299	269.9954	3.6345
1	544.0000	292.2976	64.1591	64.1591	-50.4979	327.5678	272.0726	268.4641	3.6085
1	549.0000	290.2183	63.5072	63.5072	-50.0758	325.7116	270.5299	266.9475	3.5824
1	554.0000	288.1443	62.8632	62.8632	-49.6567	323.8677	269.0016	265.4454	3.5562
1	559.0000	286.0759	62.2269	62.2269	-49.2407	322.0361	267.4876	263.9576	3.5300
1	564.0000	284.0135	61.5984	61.5984	-48.8277	320.2169	265.9878	262.4841	3.5037
1	569.0000	281.9572	60.9775	60.9775	-48.4177	318.4100	264.5018	261.0245	3.4773
1	574.0000	279.9075	60.3640	60.3640	-48.0107	316.6154	263.0297	259.5788	3.4509
1	579.0000	277.8644	59.7578	59.7578	-47.6066	314.8332	261.5713	258.1467	3.4245
1	584.0000	275.8283	59.1588	59.1588	-47.2056	313.0632	260.1263	256.7282	3.3981
1	589.0000	273.7994	58.5669	58.5669	-46.8075	311.3055	258.6948	255.3230	3.3717
1	594.0000	271.7779	57.9821	57.9821	-46.4123	309.5601	257.2764	253.9311	3.3454
1	599.0000	269.7639	57.4041	57.4041	-46.0201	307.8263	255.8712	252.5522	3.3190
1	604.0000	267.7576	56.8329	56.8329	-45.6309	306.1058	254.4789	251.1863	3.2926

CURRENT EXTREME VALUES ARE

DT1-MAX	DT1-MIN	DT2-MAX	DT3-MAX	DT3-MIN
396.9269	0.0000	220.8904	4.3439	-.1505

10 x 10 x 10 Incl

DT Line D

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	0.0000	-2.0367	.4476	-.1972	.4476	609.1667	609.1314	609.2755	-.1440
1	.5000	5.2187	6.6755	6.6755	-2.5663	607.6566	607.2509	607.3418	-.0909
1	1.0000	15.2380	15.2094	15.2094	-5.4618	605.5425	604.5752	604.6514	-.0761
1	1.5000	26.4509	24.2751	24.2751	-8.6657	603.1398	601.5274	601.6216	-.0942
1	2.0000	38.3002	33.3536	33.3536	-12.0112	600.5603	598.2740	598.4034	-.1295
1	2.5000	45.1168	37.3691	37.3691	-13.8411	598.9812	596.2973	596.5086	-.2114
1	3.0000	50.2084	39.6643	39.6643	-15.1421	597.7332	594.8058	595.0699	-.2641
1	3.5000	54.7142	41.3156	41.3156	-16.2544	596.5927	593.4932	593.7811	-.2880
1	4.0000	59.0263	42.7365	42.7365	-17.2950	595.4746	592.2406	592.5327	-.2921
1	4.5000	63.2791	44.0633	44.0633	-18.3045	594.3537	591.0018	591.2848	-.2830
1	5.0000	67.5184	45.3437	45.3437	-19.2965	593.2208	589.7531	590.0231	-.2640
1	5.5000	71.7594	46.5944	46.5944	-20.2760	592.0727	588.5055	588.7424	-.2369
1	6.0000	76.0070	47.8216	47.8216	-21.2445	590.9084	587.2384	587.4407	-.2023
1	6.5000	80.2621	49.0277	49.0277	-22.2026	589.7276	585.9569	585.1177	-.1608
1	7.0000	84.5247	50.2138	50.2138	-23.1505	588.5302	584.6697	584.7732	-.1125
1	7.5000	94.1991	56.2184	56.2184	-25.6671	586.1926	581.3491	581.9660	-.0169
1	8.0000	105.9207	63.7382	63.7382	-28.7488	583.3930	578.6345	578.5779	.0567
1	8.5000	118.5205	71.6403	71.6403	-32.0469	580.3669	575.0329	574.9206	.1123
1	9.0000	131.5652	79.5409	79.5409	-35.4382	577.1971	571.2678	571.1052	.1617
1	9.5000	144.9617	87.3142	87.3142	-38.8770	573.9142	567.3888	567.1762	.2126
1	10.0000	158.5881	94.9235	94.9235	-42.3451	570.5304	563.4164	563.1461	.2703
1	10.5000	172.4352	102.3628	102.3628	-45.8341	567.0511	559.3592	559.0226	.3366
1	11.0000	186.4619	109.6339	109.6339	-49.3379	563.4833	555.2221	554.8089	.4132
1	11.5000	200.7123	116.7432	116.7432	-52.8522	559.8210	551.0035	550.5067	.5018
1	12.0000	215.1130	123.6977	123.6977	-56.3736	556.0756	547.2208	546.1173	.6035
1	12.5000	229.6714	130.5048	130.5048	-59.8967	552.2466	543.3508	541.6421	.7187
1	13.0000	244.3762	137.1716	137.1716	-63.4248	548.3360	539.9305	537.0823	.8483
1	14.0000	251.9696	130.9853	130.9853	-64.0164	544.9181	534.7377	533.6624	1.0553
1	15.0000	240.5171	110.1387	110.1387	-59.2286	545.3339	535.9294	534.9220	1.0074
1	16.0000	231.3903	93.1966	93.1966	-55.0202	545.6305	533.8390	535.5393	1.2997
1	17.0000	223.1124	79.4014	79.4014	-51.2992	545.6701	533.7510	535.6921	1.8188
1	18.0000	215.8602	68.1449	68.1449	-47.9916	545.5460	533.7820	535.4977	2.4842
1	19.0000	209.4543	58.9396	58.9396	-45.0376	545.2854	533.8280	535.0435	3.2396
1	20.0000	203.7467	51.3945	51.3945	-42.3879	544.9098	533.8437	534.3944	4.0453
1	21.0000	198.6271	45.1956	45.1956	-40.0026	544.4369	533.8473	533.5694	4.8739
1	22.0000	193.9941	40.0905	40.0905	-37.8485	543.8812	533.8401	532.6950	5.7067
1	23.0000	189.7726	35.8984	35.8984	-35.8984	543.2544	533.8242	531.7091	6.5311
1	24.0000	185.9001	34.1291	34.1291	-34.1291	542.5665	533.8001	530.6624	7.3388
1	25.0000	182.3252	32.5211	32.5211	-32.5211	541.8258	533.7695	529.5710	8.1246
1	26.0000	179.0061	31.0578	29.0519	-31.0578	541.0393	533.7325	528.4470	8.8855
1	27.0000	175.4685	29.7247	25.0650	-29.7247	540.2129	533.6915	527.2896	9.6198
1	28.0000	173.0041	28.2095	23.8172	-28.2095	539.3519	533.6453	526.1362	10.3270
1	29.0000	170.2695	27.4010	22.6193	-27.4010	538.4607	533.5965	524.9623	11.0072
1	30.0000	167.6881	26.3894	20.8466	-26.3894	537.5434	533.5442	523.7820	11.6609
1	31.0000	165.2349	25.4661	19.8669	-25.4661	536.6032	533.4837	522.5989	12.2890
1	32.0000	162.9052	24.6233	19.0427	-24.6233	535.6433	533.4207	521.4154	12.8924
1	33.0000	160.6845	23.8538	18.3504	-23.8538	534.6663	533.3509	520.2336	13.4773
1	34.0000	158.5631	23.1512	17.7680	-23.1512	533.6748	533.2849	519.0550	14.0298
1	35.0000	156.5328	22.5098	17.2795	-22.5098	532.6708	532.2447	517.8810	14.5661
1	36.0000	154.5863	21.9241	16.6667	-21.9241	531.6552	531.1794	516.7124	15.0821

14 x 14 x 10 Inch Tee
 DT Line A

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	37.0000	152.7176	21.3694	16.5240	-21.3894	530.6328	531.1290	515.5499	15.5791
1	38.0000	150.9213	20.9011	16.2332	-20.9011	529.6022	530.4522	514.3941	16.0581
1	39.0000	149.1927	20.4553	15.9937	-20.4553	528.5656	529.7654	513.2455	16.5199
1	40.0000	147.5276	20.0481	15.7925	-20.0481	527.5244	528.0699	512.1043	16.9656
1	41.0000	145.8657	19.6569	15.5669	-20.0061	526.4828	526.5027	509.1765	17.3261
1	42.0000	144.2070	19.2666	15.3333	-20.0000	525.4400	525.4400	508.0000	17.5308
1	43.0000	142.5503	18.8772	15.1000	-20.0000	524.3972	524.3972	506.8222	17.6817
1	44.0000	140.8956	18.4888	14.8667	-20.0000	523.3544	523.3544	505.6444	17.8324
1	45.0000	139.2409	18.1000	14.6333	-20.0000	522.3116	522.3116	504.4666	17.9831
1	46.0000	137.5862	17.7111	14.4000	-20.0000	521.2688	521.2688	503.2888	18.1338
1	47.0000	135.9315	17.3222	14.1667	-20.0000	520.2260	520.2260	502.1111	18.2845
1	48.0000	134.2768	16.9333	13.9333	-20.0000	519.1832	519.1832	500.9333	18.4352
1	49.0000	132.6221	16.5444	13.7000	-20.0000	518.1404	518.1404	500.0000	18.5859
1	50.0000	130.9674	16.1556	13.4667	-20.0000	517.0976	517.0976	499.1111	18.7366

COUPL MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LPM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	37.0000	152.7176	21.3694	16.5240	-21.3894	530.6328	531.1290	515.5499	15.5791
1	38.0000	150.9213	20.9011	16.2352	-20.9011	529.6022	530.4522	514.3941	16.0581
1	39.0000	149.1927	20.4553	15.9937	-20.4553	528.5656	529.7654	513.2455	16.5199
1	40.0000	147.5276	20.0461	15.7925	-20.0461	527.5244	529.0699	512.1043	16.9656
1	41.0000	153.6557	22.1569	22.1569	-21.9066	524.8428	526.5027	509.1765	17.3261
1	42.0000	165.3350	32.4866	32.4866	-25.3235	520.9382	522.4944	504.9635	17.5308
1	43.0000	180.0503	44.2672	44.2672	-29.5347	516.3040	517.5771	500.0154	17.5617
1	44.0000	195.6376	55.5663	55.5663	-33.8953	511.3787	512.2532	494.8007	17.4524
1	45.0000	230.1309	67.2766	67.2766	-41.9282	494.4863	495.3284	477.3195	18.0089
1	54.0000	249.4968	67.6437	67.6437	-45.2435	480.0644	481.7270	462.2709	19.4669
1	59.0000	262.3915	65.5840	65.5840	-46.7022	466.5245	469.3574	447.9435	21.3769
1	64.0000	271.8086	63.3815	63.3815	-47.3347	453.3408	457.4796	434.0088	23.4708
1	69.0000	279.0077	61.5433	61.5433	-47.5750	440.3165	445.7982	420.1835	25.6147
1	74.0000	284.6540	60.1165	60.1165	-47.6327	427.3665	434.2086	406.4653	27.7433
1	79.0000	289.1609	59.0424	59.0424	-47.6150	414.4517	422.5555	392.8331	29.8224
1	84.0000	292.8132	58.2510	58.2510	-47.5775	401.5543	411.1100	379.2757	31.8351
1	89.0000	295.8179	57.6819	57.6819	-47.5487	388.6662	399.5503	365.7821	33.7732
1	94.0000	298.3301	57.2867	57.2867	-47.5222	375.7844	387.9869	352.3531	35.6338
1	99.0000	300.4681	57.0278	57.0278	-47.5032	362.9080	376.3909	338.9743	37.4166
1	104.0000	297.9066	54.1175	54.1175	-46.4434	351.0890	365.9743	326.8977	39.0765
1	109.0000	292.1548	50.2430	50.2430	-44.6791	340.1326	356.4554	315.8543	40.6111
1	114.0000	284.8215	46.5516	46.5516	-42.7336	329.7688	347.5135	305.5169	41.9966
1	119.0000	276.5844	43.2638	43.2638	-40.7759	319.8971	338.9815	295.7689	43.2127
1	124.0000	267.8265	40.3713	40.3713	-38.8750	310.4690	330.8753	286.5518	44.2536
1	129.0000	258.7762	37.8198	37.8198	-37.0604	301.4553	322.9483	277.8250	45.1234
1	134.0000	249.5597	35.5533	35.5533	-35.3431	292.8348	315.3853	269.5560	45.8293
1	139.0000	240.4198	33.7249	33.7249	-33.7249	284.5896	308.0974	261.7160	46.3814
1	144.0000	231.3288	32.2006	32.2006	-32.2006	276.7035	301.0690	254.2781	46.7909
1	149.0000	222.3853	30.7645	30.7645	-30.7645	269.1620	294.2859	247.2186	47.0693
1	154.0000	213.6452	29.4093	29.4093	-29.4093	261.9505	287.7391	240.5150	47.2241
1	159.0000	205.1360	28.1263	28.1263	-28.1263	255.0548	281.4157	234.1461	47.2696
1	164.0000	196.8813	26.9157	26.9157	-26.9157	248.4617	275.3077	228.0928	47.2149
1	169.0000	188.5933	25.7658	25.7658	-25.7658	242.1577	269.4067	222.3368	47.0700
1	174.0000	181.1809	24.6745	24.6745	-24.6745	236.1303	263.7050	216.8614	46.8436
1	179.0000	173.7471	23.6375	23.6375	-23.6375	230.3672	258.1952	211.6511	46.5441
1	184.0000	166.5914	22.6511	22.6511	-22.6511	224.8567	252.8704	206.6914	46.1790
1	189.0000	159.7112	21.7119	21.7119	-21.7119	219.5875	247.7236	201.9685	45.7551
1	194.0000	153.1024	20.8162	20.8162	-20.8162	214.5488	242.7485	197.4700	45.2785
1	199.0000	146.7587	19.9614	19.9614	-19.9614	209.7304	237.9393	192.1638	44.7554
1	204.0000	140.6728	19.1447	19.1447	-19.1447	205.1223	233.2903	189.0992	44.1911
1	209.0000	134.8370	18.3638	18.3638	-18.3638	200.7151	228.7955	185.2052	43.5904
1	214.0000	129.2428	17.6169	17.6169	-17.6169	196.4996	224.4498	181.4922	42.9576
1	219.0000	123.9817	16.9021	16.9021	-16.9021	192.4673	220.2483	177.9510	42.2973
1	224.0000	118.7449	16.2175	16.2175	-16.2175	188.6096	216.1861	174.5726	41.6133
1	229.0000	113.8238	15.5617	15.5617	-15.5617	184.9188	212.2586	171.3495	40.9081
1	234.0000	109.1086	14.9334	14.9334	-14.9334	181.3872	208.4614	168.2734	40.1880
1	239.0000	104.5936	14.3311	14.3311	-14.3311	178.0076	204.7902	165.3371	39.4531
1	244.0000	100.2676	13.7538	13.7538	-13.7538	174.7732	201.2411	162.5336	38.7073
1	249.0000	96.1238	13.2005	13.2005	-13.2005	171.6776	197.8101	159.8570	37.9530
1	254.0000	92.1548	12.6702	12.6702	-12.6702	168.7146	194.4934	157.3008	37.1926

14x14x10 Inch Tee

DT Line A

COUPL MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LPM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	259.0000	88.3528	12.1623	11.2213	-12.1623	165.8782	191.2873	154.8592	36.4281
1	264.0000	84.7109	11.6756	10.7637	-11.6756	163.1829	188.1882	152.5267	35.6615
1	269.0000	81.2228	11.2091	10.3259	-11.2091	160.5634	185.1927	150.2984	34.8943
1	274.0000	77.6818	10.7618	9.9069	-10.7618	158.0745	182.2972	148.1691	34.1281
1	279.0000	74.6819	10.3330	9.5057	-10.3330	155.6915	179.4985	146.1344	33.3641
1	284.0000	71.6172	9.9217	9.1217	-9.9217	153.4096	176.7933	144.1898	32.6035
1	289.0000	68.6817	9.5273	8.7538	-9.5273	151.2246	174.1784	142.3310	31.8474
1	294.0000	65.8701	9.1490	8.4015	-9.1490	149.1320	171.6510	140.5541	31.0969
1	299.0000	63.1771	8.7861	8.0639	-8.7861	147.1279	169.2080	138.8553	30.3527
1	304.0000	60.5976	8.4380	7.7405	-8.4380	145.2085	166.8466	137.2510	29.6156

CURRENT EXTREME VALUES ARE

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL

LOFT LOCE TESTING FOR 14 IN TEE

UNITS-BTU, SEC, DEG FAR, LBM, IN

SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	259.0000	88.3528	12.1623	11.2213	-12.1623	165.8782	191.2973	154.8592	36.4281
1	264.0000	84.7109	11.6756	10.7637	-11.6756	163.1629	188.1882	152.5267	35.6615
1	269.0000	81.2228	11.2091	10.3259	-11.2091	160.5634	185.1927	150.2984	34.8943
1	274.0000	77.8818	10.7618	9.9069	-10.7618	158.0745	182.2972	148.1691	34.1281
1	279.0000	74.6819	10.3330	9.5057	-10.3330	155.6915	179.4985	146.1344	33.3641
1	284.0000	71.6172	9.9217	9.1217	-9.9217	153.4096	176.7933	144.1896	32.6035
1	289.0000	68.6817	9.5273	8.7538	-9.5273	151.2246	174.1784	142.3310	31.8474
1	294.0000	65.8701	9.1490	8.4015	-9.1490	149.1320	171.6510	140.5541	31.0969
1	299.0000	63.1771	8.7861	8.0639	-8.7861	147.1279	169.2080	138.8553	30.3527
1	304.0000	60.5976	8.4380	7.7405	-8.4380	145.2085	166.8466	137.2310	29.6156

CURRENT EXTREME VALUES ARE

DT1-MAX DT1-MIN DT2-MAX DT3-MAX DT3-MIN

300.4681 -2.0387 137.1716 47.2696 -.2921

14x14x10 Inch Tee

DT Line A

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL

LOFT LOCE TESTING FOR 14 IN TEE

UNITS-BTU, SEC, DEG FAR, LBM, IN

SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
2	0.0000	-1.6362	5.1131	-.3024	5.1131	609.4855	609.1834	609.5716	-.3093
2	.5000	6.0198	5.8627	-.8627	5.8627	607.8537	607.2959	607.4804	-.1845
2	1.0000	17.0232	13.2762	13.2762	13.2762	605.4548	604.6073	604.6071	-.0002
2	1.5000	29.6962	21.1210	21.1210	21.1210	602.6598	601.5409	601.3790	-.1619
2	2.0000	43.3011	28.8621	28.8621	28.8621	599.5748	598.2628	597.9386	-.3243
2	2.5000	57.9066	32.1077	32.1077	32.1077	597.4947	596.2504	595.9096	-.3508
2	3.0000	73.5978	33.5978	33.5978	33.5978	595.7839	594.7205	594.3229	-.4175
2	3.5000	84.3951	34.3951	34.3951	34.3951	594.1990	593.3961	592.8360	-.5301
2	4.0000	94.9115	34.9115	34.9115	34.9115	592.6473	592.1085	591.4373	-.6712
2	4.5000	75.6583	35.3066	35.3066	35.3066	591.0933	590.8318	590.0037	-.8287

CO MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	0.0000	-1.6302	5.5131	-3.3024	-5.5131	609.4855	609.1834	609.5716	-3.3883
2	0.5000	5.0198	5.8627	-5.8627	-2.7064	607.8537	607.2959	607.4604	-1.1845
3	1.0000	17.0232	13.2762	13.2762	-5.8192	605.4648	604.6073	604.6071	-0.0002
4	1.5000	29.6962	21.1210	21.1210	-9.3506	602.6598	601.5409	601.3790	-0.1619
5	2.0000	43.3611	28.8621	28.8621	-13.0985	599.5748	598.2628	597.9386	-0.3243
6	2.5000	51.9686	32.1077	32.1077	-15.3227	597.4947	596.2504	595.9096	-0.3508
7	3.0000	58.6317	33.5978	33.5978	-16.9443	595.7839	594.7405	594.3229	-0.4175
8	3.5000	64.5433	34.3951	34.3951	-18.3169	594.1990	593.3961	592.8660	-0.5301
9	4.0000	70.1609	34.9115	34.9115	-19.5763	592.6473	592.1085	591.4373	-0.6712
10	4.5000	75.6583	35.3066	35.3066	-20.7752	591.0933	590.8318	590.0037	-0.8282
11	5.0000	81.1038	35.6426	35.6426	-21.9338	589.5237	589.5486	588.5541	-0.9845
12	5.5000	86.5227	35.9438	35.9438	-23.0606	587.9333	587.2521	587.0850	-1.1672
13	6.0000	91.9250	36.2199	36.2199	-24.1586	586.3204	586.9401	585.5950	-1.3451
14	6.5000	97.3141	36.4747	36.4747	-25.2306	584.6844	585.6116	584.0837	-1.5279
15	7.0000	102.6915	36.7102	36.7102	-26.2766	583.0252	584.2666	582.5510	-1.7156
16	7.5000	113.7535	41.0920	41.0920	-28.9336	580.1281	581.4990	579.4396	-2.0594
17	8.0000	127.8644	46.8432	46.8432	-32.0464	576.6508	578.1228	575.7300	-2.3628
18	8.5000	142.0264	52.5066	52.5066	-35.8429	572.8480	574.4539	571.7406	-2.7133
19	9.0000	157.4719	58.8873	58.8873	-39.5741	568.8207	570.6158	567.5769	-3.0389
20	9.5000	173.4118	64.6432	64.6432	-43.3765	564.6110	566.6578	563.2759	-3.3819
21	10.0000	189.7473	70.1298	70.1298	-47.2208	560.2383	562.6002	558.8513	-3.7489
22	10.5000	206.4222	75.3413	75.3413	-51.0897	555.7131	558.4513	554.3100	-4.1413
23	11.0000	223.3490	80.2856	80.2856	-54.9727	551.0426	554.2162	549.6566	-4.5596
24	11.5000	240.6514	84.9775	84.9775	-58.8624	546.2317	549.8978	544.8941	-5.0037
25	12.0000	258.1532	89.4310	89.4310	-62.7520	541.2849	545.4986	540.0255	-5.4731
26	12.5000	275.8539	93.6576	93.6576	-66.6349	536.2071	541.0207	535.0534	-5.9673
27	13.0000	293.8224	97.6691	97.6691	-70.5057	531.0023	536.4661	529.9802	-6.4858
28	13.5000	307.2330	89.6056	89.6056	-71.8485	525.1593	532.9696	525.8670	-7.1026
29	14.0000	306.1776	74.4953	74.4953	-68.7199	522.4343	533.6500	527.2212	-6.4389
30	14.5000	303.9477	65.8250	62.1215	-65.6250	520.0496	534.1304	527.9925	-6.1379
31	15.0000	300.8899	62.4593	51.9013	-62.4593	517.9316	534.4201	528.3228	-6.0973
32	15.5000	297.2527	59.2944	43.3984	-59.2944	516.0236	534.5601	528.5175	-6.2426
33	16.0000	293.8224	56.1833	36.2818	-56.1833	514.2814	534.5750	528.0558	-6.5192
34	16.5000	288.9511	53.1641	30.2963	-53.1641	512.6707	534.4846	527.5973	-6.8874
35	17.0000	284.5378	50.2637	25.2424	-50.2637	511.1648	534.3052	526.9873	-7.3179
36	17.5000	280.0618	47.4995	20.9122	-47.4995	509.7432	534.0500	526.2604	-7.7895
37	18.0000	275.5951	44.6626	17.3289	-44.6626	508.3896	533.7300	525.4434	-8.2866
38	18.5000	271.1654	42.4182	14.2657	-42.4182	507.0915	533.3543	524.5566	-8.7977
39	19.0000	266.8203	40.1080	11.6310	-40.1080	505.8391	532.9308	523.6162	-9.3146
40	19.5000	262.5708	37.9503	9.3713	-37.9503	504.6247	532.4659	522.6346	-9.8314
41	20.0000	258.4338	35.9415	7.4642	-35.9415	503.4521	531.9652	521.6216	-10.3437
42	20.5000	254.4218	34.0763	5.8450	-34.0763	502.2866	531.4335	520.5849	-10.8458
43	21.0000	250.5367	32.2384	4.4590	-32.2384	501.1544	530.8746	519.5806	-11.3440
44	21.5000	246.7505	30.5008	3.2852	-30.5008	500.0423	530.2922	518.4636	-11.8286
45	22.0000	243.1748	28.9270	2.2694	-28.9270	498.9479	529.6893	517.3876	-12.3017
46	22.5000	239.6917	27.9168	1.4464	-27.9168	497.8692	529.0683	516.3056	-12.7626
47	23.0000	236.3390	26.6654	0.7349	-26.6654	496.8044	528.4315	515.2201	-13.2114
48	23.5000	233.1137	25.5145	0.1365	-25.5145	495.7522	527.7809	514.1329	-13.6480
49	24.0000	230.0123	24.4570	-0.3647	-24.4570	494.7115	527.1181	513.0454	-14.0727
50	24.5000	227.0307	23.4659	-0.7620	-23.4659	493.6612	526.4447	511.9589	-14.4857

14x14x10 Inch Tee
 DT Line B

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	37.0000	224.1647	22.5947	-1.1272	-22.5947	492.6606	525.7617	510.6743	14.2874
2	38.0000	221.4100	21.7773	-1.4103	-21.7773	491.6488	525.0705	509.7922	15.2783
3	39.0000	218.7620	21.0277	-1.6399	-21.0277	490.6453	524.3720	508.7132	15.6538
4	40.0000	216.2163	20.3404	-1.8235	-20.3404	489.6496	523.6679	507.6377	16.0292
5	41.0000	214.4939	21.5133	-2.1313	-21.5133	487.4012	521.1603	504.2792	16.8811
6	42.0000	227.5618	23.5892	-7.4729	-23.5892	484.0615	517.2515	499.3143	17.9372
7	43.0000	238.6829	26.8844	-14.2268	-26.8844	479.9165	512.4451	493.4725	18.9727
8	44.0000	251.8656	30.1189	-20.7235	-30.1189	475.2816	507.2241	487.2553	19.8688
9	45.0000	267.3241	37.3826	-27.0826	-37.0826	466.4617	499.1867	467.4773	22.7094
10	46.0000	309.0400	39.4717	-31.9044	-39.4717	439.5345	476.2873	450.6606	25.5227

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COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
N	37.0000	224.1647	22.5847	-1.1272	-22.5947	492.6606	525.7617	510.8743	14.8874
N	38.0000	221.4100	21.7773	-1.4103	-21.7773	491.6488	525.0705	509.7922	15.2783
N	39.0000	218.7620	21.0277	-1.6399	-21.0277	490.6453	524.3720	508.7132	15.6588
N	40.0000	216.2163	20.3404	-1.8235	-20.3404	489.6496	523.6670	507.6377	16.0292
N	41.0000	219.4939	21.3133	1.6603	-21.3133	487.4012	521.1603	504.2792	16.8811
N	42.0000	227.5618	23.5892	7.4729	-23.5892	484.0615	517.2515	499.3143	17.9372
N	43.0000	238.6825	26.6844	14.2268	-26.6844	479.9165	512.4451	493.4725	18.9727
N	44.0000	251.8054	30.1185	20.7538	-30.1185	475.2816	507.2241	487.3553	19.8688
N	49.0000	287.3261	37.0820	25.1245	-37.0820	456.4617	490.1867	467.4773	22.7094
N	54.0000	309.0400	39.4717	21.9044	-39.4717	439.5345	476.2873	450.6606	25.6267
N	59.0000	323.4510	39.7256	17.3122	-39.7256	423.5677	463.5593	434.8759	28.5834
N	64.0000	333.5049	38.9902	13.0777	-38.9902	408.1802	451.3189	419.5384	31.7505
N	69.0000	340.7560	37.8379	9.5702	-37.8379	393.1960	439.3087	404.4578	34.8509
N	74.0000	346.0927	36.5630	6.7666	-36.5630	378.5184	427.4192	389.5577	37.8616
N	79.0000	350.1075	35.3151	4.1504	-35.3151	364.0840	415.5947	374.8063	40.7885
N	84.0000	353.1923	34.1663	2.8038	-34.1663	349.8478	403.8040	360.1849	43.6191
N	89.0000	355.5179	33.1438	1.4185	-33.1438	335.7754	392.0273	345.6801	46.3472
N	94.0000	357.5759	32.2510	.3102	-32.2510	321.8390	380.2503	331.2789	48.9714
N	99.0000	359.2017	31.4806	-.5640	-31.4806	308.0181	368.4645	316.9706	51.4930
N	104.0000	359.3202	29.5083	-3.4822	-29.5083	293.6329	357.9045	304.1535	53.7509
N	109.0000	347.3927	26.8572	-6.8400	-26.8572	284.5433	348.3053	292.5209	55.7844
N	114.0000	337.3673	24.0699	-9.6608	-24.0699	274.4137	339.3115	281.7019	57.6095
N	119.0000	326.2178	21.4385	-11.8047	-21.4385	265.0685	330.7793	271.5615	59.2178
N	124.0000	314.4616	18.9987	-13.3524	-18.9987	256.3961	322.6378	262.0269	60.6089
N	129.0000	302.5182	16.7495	-14.4216	-16.7495	248.3153	314.8435	253.0558	61.7877
N	134.0000	290.5456	14.1193	-15.1193	-14.8408	240.7629	307.3656	244.6024	62.7632
N	139.0000	278.7268	11.5310	-15.5310	-13.1072	233.6873	300.1804	236.6341	63.5463
N	144.0000	267.1495	9.7241	-15.7241	-11.5768	227.0443	293.2687	229.1213	64.1474
N	149.0000	255.8847	7.7510	-15.7510	-10.2268	220.7967	286.5137	222.0358	64.5778
N	154.0000	244.9753	5.6518	-15.6518	-9.0355	214.9124	280.2011	215.3524	64.8486
N	159.0000	234.4459	3.4377	-15.4377	-7.9826	209.3624	274.0188	209.0474	64.9714
N	164.0000	224.3111	1.1932	-15.1932	-7.0506	204.1220	268.0564	203.0968	64.9576
N	169.0000	214.5738	14.8763	-14.8763	-6.2252	199.1685	262.3039	197.4657	64.8182
N	174.0000	205.2335	14.5221	-14.5221	-5.4923	194.4323	256.7527	192.1884	64.5643
N	179.0000	196.2845	14.1415	-14.1415	-4.8401	190.0452	251.3945	187.1681	64.2064
N	184.0000	187.7179	13.7434	-13.7434	-4.2586	185.8411	246.2216	182.4673	63.7543
N	189.0000	179.9230	13.3347	-13.3347	-3.7389	181.8549	241.2266	178.0092	63.2174
N	194.0000	171.6877	12.9207	-12.9207	-3.2737	178.0732	236.4028	173.7991	62.6038
N	199.0000	164.1491	12.5056	-12.5056	-2.8565	174.4837	231.7439	169.8229	61.9210
N	204.0000	157.0435	12.0925	-12.0925	-2.4814	171.0746	227.2438	166.0676	61.1762
N	209.0000	150.2074	11.6638	-11.6638	-2.1437	167.8354	222.8964	162.5207	60.3757
N	214.0000	143.5775	11.2813	-11.2813	-1.8395	164.7565	218.6063	159.1705	59.5258
N	219.0000	137.4407	10.8865	-10.8865	-1.5652	161.8289	214.6384	156.0061	58.6323
N	224.0000	131.4836	10.5004	-10.5004	-1.3176	159.0439	210.7179	153.0169	57.7010
N	229.0000	125.7940	10.1236	-10.1236	-1.0943	156.3939	206.9301	150.1932	56.7369
N	234.0000	120.3599	9.7568	-9.7568	-0.8932	153.8716	203.2704	147.5255	55.7449
N	239.0000	115.1692	9.4001	-9.4001	-0.7123	151.4701	199.7346	145.0052	54.7294
N	244.0000	110.2111	9.0540	-9.0540	-0.5495	149.1830	196.3185	142.6238	53.6947
N	249.0000	105.4751	8.7184	-8.7184	-0.4035	147.0044	193.0183	140.3737	52.6446
N	254.0000	100.9510	8.3935	-8.3935	-0.2726	144.9287	189.8299	138.2474	51.5826

14 x 14 x 10 Inch Tee
 DT Line B

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
N	259.0000	96.6290	8.0791	-8.0791	-1.555	142.9506	186.7497	136.2378	50.5119
N	264.0000	92.4999	7.7753	-7.7753	-0.509	141.0651	183.7740	134.3366	49.4354
N	269.0000	88.5547	7.4818	-7.4818	0.0424	139.2675	180.8993	132.5434	48.3560
N	274.0000	84.7650	7.1985	-7.1985	0.1254	137.5534	178.1223	130.8464	47.2759
N	279.0000	81.1829	6.9251	-6.9251	0.1991	135.9186	175.4394	129.2420	46.1974
N	284.0000	77.7405	6.6615	-6.6615	0.2644	134.3593	172.8475	127.7251	45.1224
N	289.0000	74.4506	6.4074	-6.4074	0.3220	132.8716	170.3435	126.2908	44.0527
N	294.0000	71.3061	6.1626	-6.1626	0.3727	131.4522	167.9244	124.9344	42.9900
N	299.0000	68.3003	5.9268	-5.9268	0.4170	130.0975	165.5874	123.6515	41.9358
N	304.0000	65.4269	5.6998	-5.6998	0.4556	128.8055	163.3293	122.4381	40.8914

CURRENT EXTREME VALUES ARE

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 2

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
2	259.0000	96.6299	6.0791	-8.0791	-0.1555	142.9506	185.7497	136.2378	50.5119
2	264.0000	92.4999	7.7753	-7.7753	-0.0509	141.0651	183.7740	134.3386	49.4354
2	269.0000	88.5547	7.4818	-7.4818	-0.0424	139.2675	180.8993	132.5434	48.3560
2	274.0000	84.7850	7.1985	-7.1985	-0.1254	137.5534	178.1223	130.8464	47.2759
2	279.0000	81.1829	6.9251	-6.9251	-0.1991	135.9186	175.4394	129.2420	46.1974
2	284.0000	77.7465	6.6615	-6.6615	-0.2644	134.3593	172.8475	127.7251	45.1224
2	289.0000	74.4506	6.4074	-6.4074	-0.3220	132.8716	170.3435	126.2908	44.0527
2	294.0000	71.3061	6.1626	-6.1626	-0.3727	131.4522	167.9244	124.9344	42.9900
2	299.0000	68.3003	5.9268	-5.9268	-0.4170	130.0975	165.5874	123.6515	41.9358
2	304.0000	65.4269	5.6996	-5.6996	-0.4556	128.8045	163.3295	122.4381	40.8914

CURRENT EXTREME VALUES ARE
 DT1-MAX DT1-MIN DT2-MAX DT2-MIN DT3-MIN
 359.2017 -1.6302 97.6691 64.9714 -3.6863

14x14x10 Inch Tee

DT Line B

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
3	259.0000	57.1450	4.4402	3.6501	-4.4402	139.9436	129.4338	133.2074	-3.7735
3	264.0000	54.5499	4.1892	3.4408	-4.1892	138.0304	128.0910	131.3983	-3.3073
3	269.0000	52.0346	3.9532	3.2442	-3.9532	136.2154	126.8140	129.6913	-2.8773
3	274.0000	49.6422	3.7312	3.0596	-3.7312	134.4930	125.5993	128.0804	-2.4811
3	279.0000	47.3665	3.5223	2.8862	-3.5223	132.8583	124.4436	126.5602	-2.1166
3	284.0000	45.2015	3.3256	2.7233	-3.3256	131.3064	123.3437	125.1254	-1.7817
3	289.0000	43.1415	3.1408	2.5702	-3.1408	129.8330	122.2957	123.7711	-1.4744
3	294.0000	41.1811	2.9667	2.4262	-2.9667	128.4337	121.2999	122.4928	-1.1929
3	299.0000	39.3152	2.8025	2.3005	-2.8025	127.1044	120.3552	121.2552	-0.9358

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
3	0.0000	-0.8281	-0.0181	-0.0167	-0.0181	609.5930	609.7479	609.6380	1.0999
3	0.5000	-7.7214	5.9881	5.9881	-2.4467	607.7467	606.1770	607.4758	-1.2988
3	1.0000	19.3205	13.5500	13.5500	-5.6821	605.1819	601.2152	604.5038	-3.2986
3	1.5000	32.2038	21.2434	21.3454	-9.2026	602.2589	595.6307	601.1497	-5.5190
3	2.0000	45.7829	28.9671	28.9671	-12.6337	599.0963	589.7003	597.5528	-7.6125
3	2.5000	53.4089	31.8007	31.8007	-14.6830	597.1250	586.2165	595.3866	-9.1721
3	3.0000	59.1336	33.1297	33.1297	-15.9458	595.5114	583.5744	593.6565	-10.0822
3	3.5000	64.2381	33.9848	33.9848	-16.9992	593.9941	581.2133	592.0455	-10.8323
3	4.0000	69.1177	34.6886	34.6886	-17.9636	592.4912	578.9348	590.4588	-11.5240
3	4.5000	73.8994	35.3421	35.3421	-18.8783	590.9771	576.6681	588.8660	-12.1678
3	5.0000	78.6262	35.9766	35.9766	-19.7574	589.4440	574.3879	587.2576	-12.8697
3	5.5000	83.3114	36.6017	36.6017	-20.6069	587.8895	572.0853	585.6304	-13.5492
3	6.0000	87.9602	37.2201	37.2201	-21.4301	586.3129	569.7575	583.9836	-14.2261
3	6.5000	92.5749	37.8327	37.8327	-22.2292	584.7142	567.4040	582.3166	-14.9125
3	7.0000	97.1519	38.4395	38.4395	-23.0063	583.0936	565.0252	580.6293	-15.6041
3	7.5000	108.0732	43.5041	43.5041	-25.5730	580.0782	559.9600	577.3129	-17.3528
3	8.0000	121.2096	49.7541	49.7541	-28.7183	576.5128	553.8421	573.3799	-19.5378
3	8.5000	135.2936	56.1808	56.1808	-32.0558	572.6602	547.2448	569.1491	-21.9043
3	9.0000	149.7704	62.4626	62.4626	-35.4581	568.6267	540.3742	564.7236	-24.3494
3	9.5000	164.6029	68.5784	68.5784	-38.8796	564.4258	533.3075	560.1398	-26.8322
3	10.0000	179.6844	74.4555	74.4555	-42.3020	560.0762	526.0744	555.4114	-29.3370
3	10.5000	194.9784	80.1202	80.1202	-45.7152	555.5855	518.6893	550.5474	-31.8541
3	11.0000	210.4624	85.5844	85.5844	-49.1125	550.9596	511.1501	545.5535	-34.3933
3	11.5000	226.0836	90.8614	90.8614	-52.4887	546.2033	503.4922	540.4317	-36.9425
3	12.0000	241.8508	95.9642	95.9642	-55.8400	541.3212	495.6900	535.1955	-39.5055
3	12.5000	257.7349	100.9052	100.9052	-59.1634	536.3173	487.7579	529.8400	-42.0821
3	13.0000	273.7185	105.6959	105.6959	-62.4564	531.1955	479.6999	524.3720	-44.6721
3	13.5000	279.6223	97.6404	97.6404	-61.6228	526.2993	474.2833	519.7297	-45.4464
3	14.0000	261.7075	75.5854	75.5854	-54.1656	526.7179	477.6960	521.2724	-43.5763
3	14.5000	246.1636	58.9097	58.9097	-47.8499	526.8247	480.0258	522.2694	-42.2436
3	15.0000	232.6617	46.2852	46.2852	-42.4606	526.6990	481.5604	523.6486	-41.2883
3	15.5000	220.8723	37.9355	37.9355	-37.7168	526.3988	482.5098	523.1062	-40.5964
3	16.0000	210.4399	34.0566	34.0566	-34.0566	525.9661	483.7275	523.1143	-40.0868
3	16.5000	201.1389	30.7555	30.7555	-30.7555	525.4319	483.2256	522.9278	-39.7022
3	17.0000	192.7999	27.9377	27.9377	-27.9377	524.8186	483.1864	522.5865	-39.4021
3	17.5000	185.2747	25.5313	25.5313	-25.5313	524.1427	482.9704	522.1263	-39.1579
3	18.0000	178.4432	23.4740	23.4740	-23.4740	523.4167	482.6219	521.5718	-38.9499
3	18.5000	172.2277	21.7129	21.7129	-21.7129	522.6494	482.1739	520.9361	-38.7642
3	19.0000	166.5371	20.2035	20.2035	-20.2035	521.8478	481.6506	520.2421	-38.5914
3	19.5000	161.3138	18.9079	18.9079	-18.9079	521.0171	481.0700	519.4954	-38.4254
3	20.0000	156.5094	17.7442	17.7442	-17.7442	520.1612	480.4454	518.7072	-38.2618
3	20.5000	152.0677	16.6353	16.6353	-16.6353	519.2835	479.7870	517.8851	-38.0981
3	21.0000	147.9628	16.0061	16.0061	-16.0061	518.3863	479.1021	517.0348	-37.9326
3	21.5000	144.1594	15.2933	15.2933	-15.2933	517.4720	478.3965	516.1611	-37.7645
3	22.0000	140.6261	14.6742	14.6742	-14.6742	516.5423	477.6745	515.2679	-37.5934
3	22.5000	137.3412	14.1366	14.1366	-14.1366	515.5987	476.9392	514.3583	-37.4191
3	23.0000	134.2820	13.6693	13.6693	-13.6693	514.6427	476.1932	513.4350	-37.2418
3	23.5000	131.4290	13.2616	13.2616	-13.2616	513.6756	475.4383	512.5002	-37.0619
3	24.0000	129.7650	12.9051	12.9051	-12.9051	512.6983	474.6762	511.5596	-36.8795
3	24.5000	126.2746	12.5926	12.5926	-12.5926	511.7121	473.9078	510.6029	-36.6951

14 x 14 x 10 Inch Tee
 DT Line C

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
3	37.0000	123.9438	12.3178	7.6693	-12.3178	510.7179	473.1342	509.6432	-36.5090
3	38.0000	121.7600	12.0755	7.7246	-12.0755	509.7166	472.3560	508.6777	-36.3216
3	39.0000	119.7119	11.8611	7.7876	-11.8611	508.7090	471.5740	507.7073	-36.1334
3	40.0000	117.7861	11.6709	7.8592	-11.6709	507.6959	470.7884	506.7329	-35.9445
3	41.0000	125.7141	14.2214	14.2214	-14.2063	504.5155	468.6928	503.2042	-36.5114
3	42.0000	140.2705	23.8739	23.8739	-18.4500	494.7538	460.2281	497.8699	-37.6458
3	43.0000	158.0965	34.2195	34.2195	-23.3916	494.0735	452.4082	491.5436	-39.1355
3	44.0000	176.4880	43.4981	43.4981	-28.2518	488.0365	444.1167	484.8949	-40.7782
3	45.0000	212.9610	48.7709	48.7709	-35.0336	467.2986	419.1555	463.4596	-44.3041
3	46.0000	230.5833	48.1856	48.1856	-36.5667	449.6461	399.4250	445.6323	-46.2074

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COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTC, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
37.0000	123.94333	12.3178	7.6693	-12.3178	510.7179	473.1342	509.6432	-36.5090	37.0000
38.0000	121.76000	12.0755	7.7246	-12.0755	509.7166	472.3560	508.6777	-36.3215	38.0000
39.0000	119.71119	11.8611	7.7876	-11.8611	508.7090	471.5740	507.7073	-36.1334	39.0000
40.0000	117.78991	11.6709	7.8555	-11.6709	507.6959	470.7884	506.7329	-35.9445	40.0000
41.0000	125.7141	14.2214	14.2214	-14.2214	504.5155	466.6928	503.2042	-36.5114	41.0000
42.0000	140.2705	23.6739	23.6739	-18.4500	499.7538	460.2241	497.8699	-37.6458	42.0000
43.0000	158.0965	34.2195	34.2195	-23.3916	494.0735	452.4082	491.5436	-39.1355	43.0000
44.0000	176.4880	43.4981	43.4981	-28.2516	486.0365	444.1167	484.8949	-40.7782	44.0000
49.0000	212.4610	48.7709	48.7709	-35.0336	467.2986	419.1555	463.4596	-44.3041	49.0000
54.0000	230.5633	46.1856	46.1856	-36.2667	449.6461	399.4250	445.6323	-46.2074	54.0000
59.0000	240.2867	42.9498	42.9498	-36.4714	433.3000	381.7797	429.1810	-47.4052	59.0000
64.0000	246.0055	40.3640	40.3640	-35.9046	417.6609	365.2112	413.4026	-48.1914	64.0000
69.0000	249.4757	38.4713	38.4713	-35.2572	402.4721	349.3420	398.0267	-48.6846	69.0000
74.0000	251.6054	37.1047	37.1047	-34.6575	387.5929	333.9732	382.9211	-48.9479	74.0000
79.0000	252.9100	36.1120	36.1120	-34.1393	372.9452	318.9856	368.0193	-49.0337	79.0000
84.0000	253.7342	35.3614	35.3614	-33.7037	358.4788	304.2965	353.2805	-49.9840	84.0000
89.0000	254.1863	34.8355	34.8355	-33.3412	344.1599	289.8447	338.6771	-48.6323	89.0000
94.0000	254.4777	34.4204	34.4204	-33.0373	329.9614	275.5813	324.1876	-48.6063	94.0000
99.0000	254.6657	34.1019	34.1019	-32.7835	315.8653	261.4596	309.7960	-48.3264	99.0000
104.0000	249.7457	31.6056	31.6056	-31.3534	303.2154	249.7605	296.9898	-47.2293	104.0000
109.0000	241.6747	28.5322	28.5322	-29.3879	291.7751	239.8685	285.4497	-45.5812	109.0000
114.0000	232.3933	25.7892	25.7892	-27.3925	281.1968	231.1088	274.7739	-43.6650	114.0000
119.0000	222.6537	23.4569	23.4569	-25.5085	271.3313	223.2016	264.6051	-41.6035	119.0000
124.0000	212.8316	21.4740	21.4740	-23.7684	262.0917	215.9938	255.4573	-39.4644	124.0000
129.0000	203.1295	19.7193	19.7193	-22.1694	253.4152	209.3770	246.6727	-37.2957	129.0000
134.0000	193.6681	18.2562	18.2562	-20.7016	245.2550	203.2754	238.4061	-35.1307	134.0000
139.0000	184.5149	16.9219	16.9219	-19.3521	237.5717	197.6251	230.6200	-32.9949	139.0000
144.0000	175.7088	15.7255	15.7255	-18.1089	230.3311	192.3744	223.2830	-30.9086	144.0000
149.0000	167.2652	14.6429	14.6429	-16.9607	223.5035	187.4809	216.3663	-28.8854	149.0000
154.0000	159.1990	13.6557	13.6557	-15.8976	217.0621	182.6389	209.6445	-26.9356	154.0000
159.0000	151.5016	12.7513	12.7513	-14.9111	210.9833	178.6282	203.6947	-25.0665	159.0000
164.0000	144.1776	11.9196	11.9196	-13.9939	205.2450	174.6128	197.8953	-23.2825	164.0000
169.0000	137.2043	11.1522	11.1522	-13.1396	199.8268	170.8403	192.4263	-21.5859	169.0000
174.0000	130.5734	10.4425	10.4425	-12.3434	194.7095	167.2911	187.2679	-19.9768	174.0000
179.0000	124.2710	9.7844	9.7844	-11.5998	189.6750	163.6478	182.4022	-18.4544	179.0000
184.0000	118.2625	9.1728	9.1728	-10.9342	185.3056	160.7947	177.8119	-17.0171	184.0000
189.0000	112.5936	8.6036	8.6036	-10.2533	180.9858	157.8182	173.4807	-15.6625	189.0000
194.0000	107.1855	8.0438	8.0438	-9.5643	176.9009	155.0060	169.3943	-14.3883	194.0000
199.0000	102.0556	7.5795	7.5795	-9.0727	173.0370	152.3470	165.5387	-13.1917	199.0000
204.0000	97.1779	7.1189	7.1189	-8.5377	169.3810	149.8310	161.9011	-12.0701	204.0000
209.0000	92.5440	6.6869	6.6869	-8.0363	165.9210	147.4483	158.4693	-11.0205	209.0000
214.0000	88.1470	6.2871	6.2871	-7.5660	162.6460	145.1921	155.2316	-10.0395	214.0000
219.0000	83.9604	5.9115	5.9115	-7.1248	159.3453	143.0532	152.1771	-9.1239	219.0000
224.0000	79.9878	5.5601	5.5601	-6.7109	156.6090	141.0257	149.2955	-8.2705	224.0000
229.0000	76.2135	5.2312	5.2312	-6.3224	153.8278	139.1010	146.5770	-7.4760	229.0000
234.0000	72.6274	4.9576	4.9576	-5.9576	151.1931	137.2752	144.0124	-6.7372	234.0000
239.0000	69.2196	4.6348	4.6348	-5.6152	148.6965	135.5418	141.5926	-6.0510	239.0000
244.0000	65.9810	4.3644	4.3644	-5.2935	146.3303	133.8958	139.3101	-5.4144	244.0000
249.0000	62.9029	4.1109	4.1109	-4.9912	144.0873	132.3321	137.1565	-4.8245	249.0000
254.0000	59.9768	3.8732	3.8732	-4.7072	141.9605	130.8462	135.1246	-4.2784	254.0000

14x14x10 Inch Tee
 DT Line C

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTC, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
3	259.0000	57.1950	4.4402	3.6501	-4.4402	139.9436	129.4338	133.2074	-3.7735
3	264.0000	54.5499	4.1892	3.4408	-4.1892	138.0304	128.0910	131.3983	-3.3073
3	269.0000	52.0346	3.9532	3.2442	-3.9532	136.2154	126.8140	129.6913	-2.8773
3	274.0000	49.6422	3.7312	3.0596	-3.7312	134.4930	125.5993	128.0804	-2.4811
3	279.0000	47.3665	3.5223	2.8862	-3.5223	132.8583	124.4436	126.5602	-2.1166
3	284.0000	45.2015	3.3258	2.7233	-3.3258	131.3064	123.3437	125.1254	-1.7817
3	289.0000	43.1415	3.1408	2.5702	-3.1408	129.8930	122.2967	123.7711	-1.4744
3	294.0000	41.1811	2.9667	2.4262	-2.9667	128.4337	121.3099	122.4928	-1.1929
3	299.0000	39.3153	2.8028	2.2906	-2.8028	127.1046	120.3503	121.2861	-0.9353
3	304.0000	37.5391	2.6484	2.1634	-2.6484	125.8418	119.4467	120.1468	-0.7001

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 14 IN Tee
 UNITS-BTC, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 3

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
3	259.0000	57.1950	4.4402	3.6501	-4.4402	139.9436	129.4338	133.2074	-3.7735
3	264.0000	54.5499	4.1892	3.4408	-4.1892	138.0304	128.0910	131.3983	-3.3073
3	269.0000	52.0346	3.9532	3.2442	-3.9532	136.2154	126.8140	129.6913	-2.8773
3	274.0000	49.6422	3.7312	3.0196	-3.7312	134.4930	125.5093	128.0804	-2.4811
3	279.0000	47.3665	3.5223	2.8862	-3.5223	132.8583	124.4436	126.5602	-2.1166
3	284.0000	45.2013	3.3256	2.7233	-3.3256	131.3064	123.3437	125.1254	-1.7817
3	289.0000	43.1415	3.1408	2.5702	-3.1408	129.8330	122.2957	123.7711	-1.4744
3	294.0000	41.1811	2.9667	2.4262	-2.9667	128.4337	121.2999	122.4928	-1.1929
3	299.0000	39.3153	2.8028	2.2908	-2.8028	127.1046	120.3503	121.2861	-.9353
3	304.0000	37.5391	2.6484	2.1634	-2.6484	125.8418	119.4467	120.1468	-.7001

CURRENT EXTREME VALUES ARE
 DT1-MAX DT1-MIN DT2-MAX DT3-MAX DT3-MIN
 279.8223 -.8281 105.6959 .1099 -49.0337

14x14x10 Inch Tee
 DT Line C

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LOCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TB	DT3
1	1.0000	6.86991	10.79777	10.79777	-2.1773	607.7019	608.4996	609.3557	.1439
1	1.0000	14.6277	22.8864	22.8864	-4.8125	606.2484	607.8770	607.5421	.3349
1	1.0000	22.4354	35.0905	35.0905	-7.0709	604.7800	607.1832	606.6274	.5558
1	1.0000	30.2767	47.3351	47.3351	-9.5385	603.3050	606.4256	605.6245	.8011
1	1.0000	38.0524	59.0267	59.0267	-12.0957	602.8547	605.0039	605.0508	.9530
1	1.0000	45.8124	70.7072	70.7072	-14.6073	602.4631	605.6003	604.5092	1.0911
1	1.0000	53.5684	82.3860	82.3860	-17.0709	602.0738	605.1964	603.9750	1.2214
1	1.0000	61.3094	94.0647	94.0647	-19.5336	601.6830	604.7908	603.4450	1.3458
1	1.0000	69.0477	105.7432	105.7432	-21.9962	601.2903	604.3834	602.9178	1.4656
1	1.0000	76.7860	117.4217	117.4217	-24.4588	600.8955	603.9740	602.3920	1.5820
1	1.0000	84.5243	129.0999	129.0999	-26.9214	600.4983	603.5626	601.8667	1.6959
1	1.0000	92.2626	140.7781	140.7781	-29.3840	600.0987	603.1489	601.3409	1.8080
1	1.0000	100.0000	152.4562	152.4562	-31.8466	599.6964	602.7329	600.8138	1.9191
1	1.0000	107.7383	164.1344	164.1344	-34.3092	599.2915	602.3144	600.2846	2.0297
1	1.0000	115.4766	175.8126	175.8126	-36.7718	598.8866	601.8931	599.7511	2.1520
1	1.0000	123.2149	187.4909	187.4909	-39.2344	598.4817	601.4817	599.3391	2.2746
1	1.0000	130.9532	199.1691	199.1691	-41.6970	598.0768	601.0700	598.9271	2.3971
1	1.0000	138.6915	210.8474	210.8474	-44.1596	597.6719	600.6583	598.5151	2.5196
1	1.0000	146.4298	222.5256	222.5256	-46.6222	597.2670	600.2466	598.1034	2.6421
1	1.0000	154.1681	234.2039	234.2039	-49.0848	596.8621	599.8350	597.6917	2.7646
1	1.0000	161.9064	245.8821	245.8821	-51.5474	596.4572	599.4233	597.2800	2.8871
1	1.0000	169.6447	257.5604	257.5604	-54.0100	596.0523	599.0116	596.8683	3.0096
1	1.0000	177.3830	269.2386	269.2386	-56.4726	595.6474	598.6000	596.4566	3.1321
1	1.0000	185.1213	280.9169	280.9169	-58.9352	595.2425	598.1883	596.0449	3.2546
1	1.0000	192.8596	292.5951	292.5951	-61.3978	594.8376	597.7766	595.6332	3.3771
1	1.0000	200.5979	304.2734	304.2734	-63.8604	594.4327	597.3649	595.2215	3.4996
1	1.0000	208.3362	315.9516	315.9516	-66.3230	594.0278	596.9532	594.8098	3.6221
1	1.0000	216.0745	327.6299	327.6299	-68.7856	593.6229	596.5415	594.3981	3.7446
1	1.0000	223.8128	339.3081	339.3081	-71.2482	593.2180	596.1298	593.9864	3.8671
1	1.0000	231.5511	350.9864	350.9864	-73.7108	592.8131	595.7181	593.5747	3.9896
1	1.0000	239.2894	362.6646	362.6646	-76.1734	592.4082	595.3064	593.1630	4.1121
1	1.0000	247.0277	374.3429	374.3429	-78.6360	592.0033	594.8947	592.7513	4.2346
1	1.0000	254.7660	386.0211	386.0211	-81.0986	591.5984	594.4830	592.3396	4.3571
1	1.0000	262.5043	397.6994	397.6994	-83.5612	591.1935	594.0713	591.9279	4.4796
1	1.0000	270.2426	409.3776	409.3776	-86.0238	590.7886	593.6596	591.5162	4.6021
1	1.0000	277.9809	421.0559	421.0559	-88.4864	590.3837	593.2479	591.1045	4.7246
1	1.0000	285.7192	432.7341	432.7341	-90.9490	589.9788	592.8362	590.6928	4.8471
1	1.0000	293.4575	444.4124	444.4124	-93.4116	589.5739	592.4245	590.2811	4.9696
1	1.0000	301.1958	456.0906	456.0906	-95.8742	589.1690	592.0128	589.8694	5.0921
1	1.0000	308.9341	467.7689	467.7689	-98.3368	588.7641	591.6011	589.4577	5.2146
1	1.0000	316.6724	479.4471	479.4471	-100.7994	588.3592	591.1894	589.0460	5.3371
1	1.0000	324.4107	491.1254	491.1254	-103.2620	587.9543	590.7777	588.6343	5.4596
1	1.0000	332.1490	502.8036	502.8036	-105.7246	587.5494	590.3660	588.2226	5.5821
1	1.0000	339.8873	514.4819	514.4819	-108.1872	587.1445	589.9543	587.8109	5.7046
1	1.0000	347.6256	526.1601	526.1601	-110.6498	586.7396	589.5426	587.3992	5.8271
1	1.0000	355.3639	537.8384	537.8384	-113.1124	586.3347	589.1309	586.9875	5.9496
1	1.0000	363.1022	549.5166	549.5166	-115.5750	585.9298	588.7192	586.5758	6.0721
1	1.0000	370.8405	561.1949	561.1949	-118.0376	585.5249	588.3075	586.1641	6.1946
1	1.0000	378.5788	572.8731	572.8731	-120.5002	585.1190	587.8958	585.7524	6.3171
1	1.0000	386.3171	584.5514	584.5514	-122.9628	584.7141	587.4841	585.3407	6.4396
1	1.0000	394.0554	596.2296	596.2296	-125.4254	584.3092	587.0724	584.9290	6.5621
1	1.0000	401.7937	607.9079	607.9079	-127.8880	583.9043	586.6607	584.5173	6.6846
1	1.0000	409.5320	619.5861	619.5861	-130.3506	583.4994	586.2490	584.1056	6.8071
1	1.0000	417.2703	631.2644	631.2644	-132.8132	583.0945	585.8373	583.6939	6.9296
1	1.0000	425.0086	642.9426	642.9426	-135.2758	582.6896	585.4256	583.2822	7.0521
1	1.0000	432.7469	654.6209	654.6209	-137.7384	582.2847	585.0139	582.8705	7.1746
1	1.0000	440.4852	666.2991	666.2991	-140.2010	581.8798	584.6022	582.4588	7.2971
1	1.0000	448.2235	677.9774	677.9774	-142.6636	581.4749	584.1905	582.0471	7.4196
1	1.0000	455.9618	689.6556	689.6556	-145.1262	581.0690	583.7788	581.6354	7.5421
1	1.0000	463.6991	701.3339	701.3339	-147.5888	580.6641	583.3671	581.2237	7.6646
1	1.0000	471.4374	713.0121	713.0121	-150.0514	580.2592	582.9554	580.8120	7.7871
1	1.0000	479.1757	724.6904	724.6904	-152.5140	579.8543	582.5437	580.4003	7.9096
1	1.0000	486.9140	736.3686	736.3686	-154.9766	579.4494	582.1320	580.0000	8.0321
1	1.0000	494.6523	748.0469	748.0469	-157.4392	579.0445	581.7203	579.5883	8.1546
1	1.0000	502.3906	759.7251	759.7251	-159.9018	578.6396	581.3086	579.1766	8.2771
1	1.0000	510.1289	771.4034	771.4034	-162.3644	578.2347	580.8969	578.7649	8.3996
1	1.0000	517.8672	783.0816	783.0816	-164.8270	577.8298	580.4852	578.3532	8.5221
1	1.0000	525.6055	794.7599	794.7599	-167.2896	577.4249	580.0735	577.9415	8.6446
1	1.0000	533.3438	806.4381	806.4381	-169.7522	577.0190	579.6618	577.5298	8.7671
1	1.0000	541.0821	818.1164	818.1164	-172.2148	576.6141	579.2501	577.1181	8.8896
1	1.0000	548.8204	829.7946	829.7946	-174.6774	576.2092	578.8384	576.7064	9.0121
1	1.0000	556.5587	841.4729	841.4729	-177.1400	575.8043	578.4267	576.2947	9.1346
1	1.0000	564.2970	853.1511	853.1511	-179.6026	575.3994	578.0150	575.8830	9.2571
1	1.0000	572.0353	864.8294	864.8294	-182.0652	574.9945	577.6033	575.4713	9.3796
1	1.0000	579.7736	876.5076	876.5076	-184.5278	574.5896	577.1916	575.0596	9.5021
1	1.0000	587.5119	888.1859	888.1859	-186.9904	574.1847	576.7799	574.6479	9.6246
1	1.0000	595.2502	899.8641	899.8641	-189.4530	573.7798	576.3682	574.2362	9.7471
1	1.0000	602.9885	911.5424	911.5424	-191.9156	573.3749	575.9565	573.8245	9.8696
1	1.0000	610.7268	923.2206	923.2206	-194.3782	572.9690	575.5448	573.4128	9.9921
1	1.0000	618.4651	934.8989	934.8989	-196.8408	572.5641	575.1331	573.0011	10.1146
1	1.0000	626.2034	946.5771	946.5771	-199.3034	572.1592	574.7214	572.5894	10.2371
1	1.0000	633.9417	958.2554	958.2554	-201.7660	571.7543	574.3097	572.1777	10.3596
1	1.0000	641.6791	969.9336	969.9336	-204.2286	571.3494	573.8980	571.7660	10.4821
1	1.0000	649.4174	981.6119	981.6119	-206.6912	570.9445	573.4863	571.3543	10.6046
1	1.0000	657.1557	993.2901	993.2901	-209.1538	570.5396	573.0746	570.9426	10.7271
1	1.0000	664.8940	1004.9684	1004.9684	-211.6164	570.1347	572.6629	570.5309	10.8496
1	1.0000	672.6323	1016.6466	1016.6466	-214.0790	569.7298	572.2512	570.1192	10.9721
1	1.0000	680.3706	1028.3249	1028.3249	-216.5416	569.3249	571.8395	569.7075	11.0946
1	1.0000	688.1089	1039.9991	1039.9991	-218.9992	568.9190	571.4278	569.2958	11.2171
1	1.0000	695.8472	1051.6774	1051.6774	-221.4618	568.5141	571.0161	568.8841	11.3396
1	1.0000	703.5855	1063.3556	1063.3556	-223.9244	568.1092	570.6044	568.4724	11.4621
1	1.0000	711.3238	1075.0339	1075.0339	-226.3870	567.7043	570.1927	568.0607	11.5846
1	1.0000	719.0621	1086.7121	1086.7121	-228.8496	567.2994	569.7810	567.6490	11.7071
1	1.0000	726.8004	1098.3904	1098.3904	-231.3122	566.8945	569.3693	567.2373	11.8296
1	1.0000	734.5387	1110.0686	1110.0686	-233.7748	566.4896	568.9576	566.8256	11.9521
1	1.0000	742.2770	1121.7469	1121.7469	-236.2374	566.0847	568.5459	566.4139	12.0746
1	1.0000	750.0153	1133.4251	1133.4251	-238.6990	565.6798	568.1342	566.0022	12.1971
1	1.0000	757.7536	1145.1034	1145.1034	-241.1616	565.2749	567.7225	565.5905	12.3196
1	1.0000	765.4919	1156.7816	1156.7					

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	T8	DT3
1	38.0000	86.17116	84.3549	84.3549	-25.77746	590.9458	589.7521	582.7813	6.9708
1	39.0000	86.8647	84.1371	84.1371	-25.93392	590.7533	589.5499	582.4559	7.0940
1	40.0000	87.5577	83.9408	83.9408	-26.10334	590.5607	589.3447	582.1288	7.2159
1	41.0000	88.2507	83.7434	83.7434	-31.7287	587.9904	587.7484	579.9529	7.7556
1	42.0000	103.5170	137.5250	137.5250	-37.2327	583.6903	585.9987	577.5347	8.3739
1	43.0000	137.3384	157.7434	157.7434	-41.4947	581.0318	584.1512	575.1878	8.9634
1	44.0000	147.7836	172.5992	172.5992	-44.6986	579.0033	582.5218	573.0179	9.5039
1	45.0000	163.2311	187.0438	187.0438	-49.1398	575.6748	577.5445	566.4602	11.0843
1	54.0000	176.2208	195.8629	195.8629	-52.7412	572.7374	573.3269	560.8323	12.4946
1	59.0000	188.7267	202.7471	202.7471	-56.1337	569.8336	569.4844	555.5791	13.9053
1	64.0000	201.0434	208.5975	208.5975	-59.4176	566.9192	565.8417	550.4858	15.3559
1	69.0000	213.2436	213.8376	213.8376	-62.6245	563.9860	562.3018	545.4542	16.8476
1	74.0000	223.3534	218.6970	218.6970	-65.7667	561.0337	558.8101	540.4370	18.3731
1	79.0000	227.3627	223.3641	223.3641	-68.8505	558.0633	555.3349	535.4094	19.9255
1	84.0000	249.3381	227.7545	227.7545	-71.8860	555.0752	551.8576	530.3587	21.4990
1	89.0000	261.2259	232.0830	232.0830	-74.8591	552.0693	548.3674	525.2775	23.0899
1	94.0000	273.0516	236.3271	236.3271	-77.7907	549.0454	544.8578	520.1612	24.6965
1	99.0000	284.8212	240.5085	240.5085	-80.6777	546.0028	541.3246	515.0066	26.3177
1	104.0000	293.1370	239.4433	239.4433	-82.4628	543.9821	538.1594	510.3355	27.8338
1	109.0000	300.0937	236.5454	236.5454	-83.8054	541.3948	535.2610	505.9734	29.2876
1	114.0000	306.6035	233.3444	233.3444	-84.9950	539.2733	532.4938	501.7659	30.7079
1	119.0000	312.7489	230.0316	230.0316	-86.0006	537.2046	529.8304	497.7313	32.0992
1	124.0000	318.5620	226.6876	226.6876	-87.0149	535.1844	527.2491	493.7872	33.4619
1	129.0000	324.0660	223.3577	223.3577	-87.8670	533.2093	524.7361	489.9404	34.7958
1	134.0000	329.2611	220.0688	220.0688	-88.6252	531.2762	522.2322	486.1814	36.1008
1	139.0000	334.2253	216.8368	216.8368	-89.2964	529.3823	519.8308	482.5034	37.3774
1	144.0000	338.9148	213.6699	213.6699	-89.8871	527.5247	517.5273	478.9011	38.6262
1	149.0000	343.3647	210.5731	210.5731	-90.4031	525.7007	515.2179	475.3699	39.8480
1	154.0000	347.5490	207.5490	207.5490	-90.8500	523.9078	512.9496	471.9060	41.0437
1	159.0000	351.6003	204.5984	204.5984	-91.2329	522.1434	510.7198	468.5059	42.2138
1	164.0000	355.4102	201.7210	201.7210	-91.5563	520.4055	508.5261	465.1668	43.3592
1	169.0000	359.0302	198.9156	198.9156	-91.8247	518.6918	506.3655	461.8860	44.4805
1	174.0000	362.4694	196.1808	196.1808	-92.0421	517.0003	504.2392	458.6609	45.5783
1	179.0000	365.7369	193.5148	193.5148	-92.2121	515.3293	502.1425	455.4890	46.6529
1	184.0000	368.8412	190.9156	190.9156	-92.3382	513.6771	500.0749	452.3701	47.7048
1	189.0000	371.7897	188.3811	188.3811	-92.4237	512.0421	498.0349	449.3006	48.7343
1	194.0000	374.5657	185.9092	185.9092	-92.4715	510.4228	496.0211	446.2794	49.7417
1	199.0000	377.2477	183.4978	183.4978	-92.4844	508.8180	494.0323	443.3052	50.7271
1	204.0000	379.7697	181.1448	181.1448	-92.4650	507.2264	492.0473	440.3764	51.6909
1	209.0000	382.1614	178.8482	178.8482	-92.4157	505.6469	490.1250	437.4918	52.6331
1	214.0000	384.4250	176.6060	176.6060	-92.3388	504.0785	488.2044	434.6503	53.5540
1	219.0000	386.5744	174.4164	174.4164	-92.2363	502.5201	486.3044	431.8508	54.4537
1	224.0000	388.6053	172.2775	172.2775	-92.1102	500.9710	484.4243	429.0921	55.3323
1	229.0000	390.5250	170.1877	170.1877	-91.9624	499.4304	482.5532	426.3733	56.1899
1	234.0000	392.3374	168.1451	168.1451	-91.7945	497.8974	480.7201	423.6935	57.0266
1	239.0000	394.0461	166.1483	166.1483	-91.6082	496.3716	478.8945	421.0518	57.8427
1	244.0000	395.5558	164.1956	164.1956	-91.4046	494.8522	477.0855	418.4474	58.6380
1	249.0000	397.1689	162.2856	162.2856	-91.1858	493.3368	475.2825	415.8795	59.4129
1	254.0000	398.5850	160.4169	160.4169	-90.9525	491.8308	473.5148	413.3474	60.1675
1	259.0000	399.9191	158.5882	158.5882	-90.7060	490.3278	471.7520	410.8502	60.9018

14x14x10 Inch Tee
 DT Line D

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	T8	DT3
1	264.0000	401.1624	156.7981	156.7981	-90.4474	488.8294	470.0034	408.3874	61.6160
1	269.0000	402.3216	155.0454	155.0454	-90.1779	487.3352	468.2585	405.9561	62.3104
1	274.0000	403.3994	153.3269	153.3269	-89.8982	485.8450	466.5469	403.5619	62.9850
1	279.0000	404.3984	151.6476	151.6476	-89.6095	484.3585	464.8379	401.1960	63.6400
1	284.0000	405.3213	150.0002	150.0002	-89.3123	482.8753	463.1414	398.8658	64.2756
1	9.0000	406.1702	148.3859	148.3859	-89.0076	481.3953	461.4567	396.5647	64.8920
1	4.0000	406.9478	146.8036	146.8036	-88.6960	479.9183	459.7836	394.2942	65.4894
1	9.0000	407.6957	145.2523	145.2523	-88.3782	478.4441	458.1217	392.0536	66.0681
1	34.0000	408.4266	143.7311	143.7311	-88.0547	476.9720	456.4506	389.8424	66.6282
1	39.0000	409.1244	142.2393	142.2393	-87.7263	475.5037	454.8301	387.6601	67.1700

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAP, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	264.0000	401.1624	156.7981	156.7981	-90.4474	488.8294	470.0034	408.3874	61.6160
1	269.0000	402.3216	155.0454	155.0454	-90.1779	487.3352	468.2685	405.9561	62.3104
1	274.0000	403.3994	153.3289	153.3289	-89.8982	485.8450	466.5469	403.5619	62.9850
1	279.0000	404.3984	151.6476	151.6476	-89.6095	484.3585	464.8379	401.1980	63.6400
1	284.0000	405.0002	150.0000	150.0000	-89.3123	482.8753	463.1414	398.8658	64.2756
1	289.0000	405.1702	148.3859	148.3859	-89.0076	481.3953	461.4567	396.5647	64.8920
1	294.0000	405.9470	146.6036	146.6036	-88.6960	479.9163	459.7836	394.2942	65.4894
1	299.0000	407.6557	145.2523	145.2523	-88.3782	478.4441	458.1217	392.0536	66.0681
1	304.0000	408.2966	143.7311	143.7311	-88.0547	476.9726	456.4706	389.8424	66.6282
1	309.0000	408.8724	142.2393	142.2393	-87.7263	475.5037	454.8301	387.6601	67.1700
1	314.0000	409.3851	140.7759	140.7759	-87.3932	474.0372	453.1997	385.5061	67.6937
1	319.0000	409.8366	139.3401	139.3401	-87.0562	472.5731	451.5794	383.3799	68.1995
1	324.0000	410.2287	137.9311	137.9311	-86.7155	471.1112	449.9687	381.2811	68.6876
1	329.0000	410.5634	136.5482	136.5482	-86.3716	469.6517	448.3675	379.2091	69.1584
1	334.0000	410.8424	135.1907	135.1907	-86.0250	468.1942	446.7754	377.1635	69.6120
1	339.0000	411.0673	133.8579	133.8579	-85.6758	466.7390	445.1924	375.1437	70.0487
1	344.0000	411.2398	132.5491	132.5491	-85.3245	465.2859	443.6181	373.1493	70.4687
1	349.0000	411.3615	131.2636	131.2636	-84.9714	463.8349	442.0524	371.1799	70.8725
1	354.0000	411.4339	130.0009	130.0009	-84.6167	462.3861	440.4950	369.2350	71.2600
1	359.0000	411.4586	128.7603	128.7603	-84.2607	460.9394	438.9460	367.3142	71.6318
1	364.0000	411.4370	127.5414	127.5414	-83.9036	459.4949	437.4049	365.4170	71.9880
1	369.0000	411.3705	126.3434	126.3434	-83.5456	458.0525	435.8718	363.5430	72.3288
1	374.0000	411.2604	125.1659	125.1659	-83.1870	456.6123	434.3465	361.6919	72.6546
1	379.0000	411.1082	124.0083	124.0083	-82.8279	455.1744	432.8287	359.8631	72.9656
1	384.0000	410.9151	122.8702	122.8702	-82.4684	453.7387	431.3185	358.0564	73.2621
1	389.0000	410.6823	121.7510	121.7510	-82.1088	452.3053	429.8157	356.2714	73.5443
1	394.0000	410.4112	120.6504	120.6504	-81.7491	450.8743	428.3201	354.5076	73.8125
1	399.0000	410.1129	119.5677	119.5677	-81.3895	449.4457	426.8317	352.7646	74.0670
1	404.0000	409.7885	118.5026	118.5026	-81.0301	448.0195	425.3503	351.0422	74.3081
1	409.0000	409.4246	117.4546	117.4546	-80.6711	446.5957	423.8753	349.3599	74.5360
1	414.0000	408.9661	116.4234	116.4234	-80.3125	445.1745	422.4083	347.6574	74.7509
1	419.0000	408.5203	115.4086	115.4086	-79.9544	443.7559	420.9475	345.9943	74.9532
1	424.0000	408.0847	114.4097	114.4097	-79.5970	442.3400	419.4934	344.3504	75.1430
1	429.0000	407.5343	113.4264	113.4264	-79.2401	440.9267	418.0459	342.7252	75.3207
1	434.0000	406.9962	112.4582	112.4582	-78.8841	439.5162	416.6050	341.1186	75.4864
1	439.0000	406.4293	111.5048	111.5048	-78.5288	438.1084	415.1705	339.5300	75.6405
1	444.0000	405.8346	110.5660	110.5660	-78.1745	436.7036	413.7425	337.9593	75.7832
1	449.0000	405.2128	109.6412	109.6412	-77.8210	435.3016	412.3208	336.4060	75.9148
1	454.0000	404.5650	108.7303	108.7303	-77.4685	433.9026	410.9054	334.8700	76.0354
1	459.0000	403.8919	107.8329	107.8329	-77.1171	432.5066	409.4962	333.3509	76.1453
1	464.0000	403.1944	106.9487	106.9487	-76.7667	431.1137	408.0932	331.8463	76.2449
1	469.0000	402.4732	106.0774	106.0774	-76.4174	429.7239	406.6963	330.3621	76.3342
1	474.0000	401.7292	105.2187	105.2187	-76.0692	428.3372	405.3055	328.8920	76.4135
1	479.0000	400.9631	104.3723	104.3723	-75.7222	426.9539	403.9208	327.4376	76.4832
1	484.0000	400.1757	103.5380	103.5380	-75.3763	425.5738	402.5420	325.9987	76.5433
1	489.0000	399.3676	102.7155	102.7155	-75.0317	424.1970	401.1692	324.5751	76.5941
1	494.0000	398.5496	101.9045	101.9045	-74.6883	422.8236	399.8023	323.1664	76.6350
1	499.0000	397.6924	101.1047	101.1047	-74.3461	421.4536	398.4413	321.7725	76.6688
1	504.0000	396.8160	100.3160	100.3160	-74.0053	420.0871	397.0861	320.3930	76.6931
1	509.0000	395.9428	99.5381	99.5381	-73.6657	418.7241	395.7367	319.0278	76.7089

14x14x10 Inch Tee

DT Line D

COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LUCE TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAP, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT21	DT20	TAVE	TA	TR	DT3
1	514.0000	395.0418	98.7708	98.7708	-73.3274	417.3647	394.3931	317.6765	76.7166
1	519.0000	394.1240	98.0138	98.0138	-72.9904	416.0089	393.0552	316.3390	76.7162
1	524.0000	393.1901	97.2669	97.2669	-72.6548	414.6568	391.7230	315.0151	76.7079
1	529.0000	392.2407	96.5299	96.5299	-72.3204	413.3083	390.3965	313.7044	76.6921
1	534.0000	391.2762	95.8026	95.8026	-71.9875	411.9636	389.0756	312.4068	76.6688
1	539.0000	390.2973	95.0848	95.0848	-71.6558	410.6227	387.7603	311.1221	76.6382
1	544.0000	389.3045	94.3763	94.3763	-71.3256	409.2855	386.4508	309.8500	76.6006
1	549.0000	388.2983	93.6770	93.6770	-70.9966	407.9523	385.1465	308.5704	76.5561
1	554.0000	387.2792	92.9865	92.9865	-70.6691	406.6229	383.8479	307.3430	76.5049
1	559.0000	386.2492	92.3065	92.3065	-70.3438	405.2976	382.5513	306.1076	76.4472

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COUPLE MOD 2 (MAY-23,77) UPDATE 1 (MAY-23,77) ECL
 LOFT LDC TESTING FOR 14 IN TEE
 UNITS-BTU, SEC, DEG FAR, LBM, IN
 SUMMARY DT TABLE FOR DTSET 1

DTSET	TIME	DT1	DT2	DT2I	DT2D	TAVE	TA	T8	DT3
1	514.0000	395.0418	98.7708	98.7708	-73.3274	417.3647	394.3931	317.6765	76.7166
1	519.0000	394.1240	98.0138	98.0138	-72.9904	416.3089	393.0552	316.3390	76.7162
1	524.0000	393.1901	97.2669	97.2669	-72.6548	414.6568	391.7230	315.0151	76.7079
1	529.0000	392.2407	96.5299	96.5299	-72.3204	413.3083	390.3965	313.7044	76.6921
1	534.0000	391.2762	95.8026	95.8026	-71.9875	411.9636	389.0756	312.4068	76.6688
1	539.0000	390.2973	95.0848	95.0848	-71.6558	410.6227	387.7603	311.1221	76.6382
1	544.0000	389.3045	94.3763	94.3763	-71.3256	409.2855	386.4506	309.8200	76.6006
1	549.0000	388.2983	93.6770	93.6770	-70.9966	407.9523	385.1465	308.5904	76.5561
1	554.0000	387.2792	92.9865	92.9865	-70.6691	406.6229	383.8479	307.3430	76.5049
1	559.0000	386.2477	92.3048	92.3048	-70.3429	405.2974	382.5549	306.1076	76.4472
1	564.0000	385.2042	91.6317	91.6317	-70.0180	403.9758	381.2673	304.8841	76.3831
1	569.0000	384.1492	90.9669	90.9669	-69.6946	402.6583	379.9851	303.6722	76.3129
1	574.0000	383.0833	90.3104	90.3104	-69.3725	401.3447	378.7085	302.4718	76.2366
1	579.0000	382.0067	89.6620	89.6620	-69.0518	400.0352	377.4372	301.2827	76.1545
1	584.0000	380.9199	89.0214	89.0214	-68.7324	398.7298	376.1713	300.1046	76.0667
1	589.0000	379.8233	88.3887	88.3887	-68.4145	397.4285	374.9108	298.9375	75.9734
1	594.0000	378.7173	87.7635	87.7635	-68.0979	396.1313	373.6557	297.7811	75.8746
1	599.0000	377.6024	87.1458	87.1458	-67.7826	394.8382	372.4059	296.6353	75.7706
1	604.0000	376.4788	86.5354	86.5354	-67.4686	393.5493	371.1614	295.4998	75.6616

CURRENT EXTREME VALUES ARE
 DT1-MAX 411.4586 DT1-MIN 0.0000 DT2-MAX 240.5085 DT3-MAX 76.7166 DT3-MIN 0.0000

14x14x10 Inch Tee

DT Line D

APPENDIX B
COMPLETE MICROFICHE LISTING
FOR COMPUTER RUNS

(See Distribution)