

IOWA ELECTRIC LIGHT AND POWER COMPANY

DUANE ARNOLD ENERGY CENTER

Reactor Containment Building Integrated Leakage Rate Test Types A, B, and C

**Periodic Test
September 1993**

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REFERENCES

1. 10CFR Part 50, Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors, January 1, 1993.
2. STP No. 47A002, Primary Containment Integrated Leakage Rate Test, Duane Arnold Energy Center, Surveillance Test Procedure.
3. ANSI N45.4, American National Standard, Leakage-Rate Testing of Containment Structures for Nuclear Reactors, March 16, 1972.
4. ANSI/ANS-56.8, Containment System Leakage Testing Requirements, January 20, 1987.
5. Bechtel Corporation's Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants, BN-TOP-1, Revision 1, November 1, 1972.
6. STP No. 47A003, Containment Leak Tightness Test - Type B Penetrations, Duane Arnold Energy Center, Surveillance Test Procedure.
7. STP No. 47A004, Airlock Local Leak Rate Test, Duane Arnold Energy Center, Surveillance Test Procedure.
8. STP No. 47A005, Containment Isolation Valve Leak Tightness Test - Type C Penetrations, Duane Arnold Energy Center, Surveillance Test Procedure.
9. IE Information Notice No. 85-71: Containment Integrated Leak Rate Tests, August 22, 1985.

1.0 PURPOSE

The purpose of this report is to present a description and analysis of the September 1993, Periodic Type A Primary Containment Integrated Leakage Rate Test (ILRT) and a summary of the Periodic Types B and C Local Leakage Rate Tests (LLRT's) conducted at Duane Arnold Energy Center (DAEC). Duane Arnold Energy Center is operated by the Iowa Electric Light and Power Company. Plant specific information and technical data is contained below.

This report has been submitted to the United States Nuclear Regulatory Commission in accordance with the requirements of 10CFR50, Appendix J, Section V, Paragraphs B1 and B3. The form and content of this report is presented in accordance with ANSI/ANS 56-8, "Containment System Leakage Testing Requirements".

1.1 General Data

Operator	Iowa Electric Light and Power
Plant	Duane Arnold Energy Center
Location	Palo, Iowa
Containment Type	Mark I, BWR-4
Docket Number	50-331
Operating License No.	DPR-49
Date Test Completed	September 20, 1993

1.2 Technical Data

Containment Net Free Air Volume	230,000 cubic feet
Design Pressure	56 psig
Calculated Peak Accident Pressure	43 psig
Containment Design Temperature	281 °F

2.0 TYPE A TEST SUMMARY

Attachment 1, Table A - Test Setup Data contains the instrumentation and associated volume fractions list for all of the ILRT instruments. Attachments 2, 3, and 4 provide the raw data input tables for Dry Bulb Temperature, Dew Point Temperature and Pressure readings respectively.

- 2.1 Pressurization** Containment pressurization was begun at approximately 1800 hours on September 19, 1993. Pressurization rate was approximately 6.0 psi/hour. Investigations of all accessible penetrations were performed throughout the pressurization and Type A test. No leaks were identified. Final containment test pressure was achieved at 0250 hours on September 20, 1993.
- 2.2 Stabilization** Containment stabilization was begun at approximately 0300 on September 20, 1993. Pressure, temperature, and dew point data were recorded at 5 minute intervals during stabilization. The temperature and leakage stabilization criteria of ANSI/ANS 56-8 were met and the containment was declared stable at 0730 on September 20, 1993. Attachment 5, Containment Temperature Stability Parameters and Attachment 6, Containment Mass Point Leakage Stability provide the containment stability parameters.
- 2.3 Type A Test** The start of the Type A test was declared at 0745 on September 20, 1993. Pressure, temperature and dew point data were recorded at 15 minute intervals throughout the Type A test. The test proceeded without incident and was successfully completed at 1545 on September 20, 1993 with a Total Time Upper Confidence Limit (UCL-TT) of 0.15356 percent/day and Mass Point Upper Confidence Limit of 0.08282 percent per day. Both Total Time and Mass Point leakage rates were below the 0.75La acceptance criteria. The Type A Test leakage and error parameters are depicted in tabular form in Attachment 7, Type A Test Leakage and Error Parameters.

- 2.4 Verification Test** The superimposed leakage verification test was started at 1630 hours on September 20, 1993. A one-hour stabilization period was implemented in accordance with BN-TOP-1. The test was successfully completed at 2130 hours on September 20, 1993. Attachment 8, Verification Test Parameters provides the upper and lower limits as well as the composite leakage for the verification test period.
- 2.5 Depressurization** After performing a radiological survey, the containment was depressurized over a period of approximately 5 hours.

NOTE

No repairs or adjustments were made to the containment boundary either during the conduct of the Type A test or the Superimposed Leakage Verification test.

3.0 TYPE A TEST RESULTS

3.1 Type A Test Data

3.1.1 Test Method: Absolute Method

3.1.2 Data Analysis Technique: Total time analysis method in accordance with BN-TOP-1, "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants", Revision 1, November, 1972.

3.1.3 Test Pressure: Between 44.0 psig and 45.0 psig.

3.1.4 Maximum Allowable Leakage Rate 0.75La (%/24 hours): 1.5 %/day

3.1.5 Calculated Leakage Rate Upper Confidence Limit (UCL): 0.15356 %/day

3.1.6 Measured Leakage Rate (Lam): 0.08080 %/day

3.2 Analysis and Interpretation

3.2.1 Acceptance Criteria: Based on Duane Arnold Technical Specification, the primary containment overall integrated leakage rate shall be maintained less than or equal to 0.75 La, where La is 2.0 % by weight of the containment air per 24 hours at Pa, 43.0 psig. 10CFR50 Appendix J, Section III A.5.b, requires that the measured/calculated leakage rate shall be less than .75 La, or 1.5 %/day as determined by the Type A test. This is interpreted to mean that the upper confidence limit (UCL) on the measured leakage rate, including all Type B and C corrections, penalties, and other leakage additions, shall be less than the above acceptance criteria. Further, a verification test using the calibrated superimposed leakage method shall be performed and satisfy the following condition:

$$(Lo + Lam - 0.25 La) \leq Lc \leq (Lo + Lam + 0.25 La)$$

where;

Lo = Superimposed Leakage rate which is between 75% and 125% of La,

Lam = Last valid Type A measured/calculated leakage rate,

Lc = Composite leakage rate as measured by the data acquisition system during the verification test,

La = Maximum allowable leakage rate at pressure Pac.

3.3 Instrumentation System

The test instrumentation system consisted of: (1) a microprocessor controlled data acquisition system (DAS); (2) fifteen drybulb resistance temperature detectors; (3) six dewpoint temperature sensors; and (4) two precision pressure gauges. Prior to containment pressurization, the calculated instrumentation system Instrument Selection Guide (ISG) was 0.034 %/day for an assumed eight hour test duration (refer to Attachment 1, Test Setup Data). This value was well below the required value of 0.5 %/day (0.25La). For testing purposes, the precision pressure gauge connected to the drywell was used.

After pressurizing the containment, and during temperature stabilization, it was determined that the Torus atmosphere was saturated and the dewcells located in the torus were reading higher than the drybulb temperature. It was decided, therefore to use the torus drybulb temperature sensors associated with these dewcells as the measure of dew point temperature. The ISG calculation was not affected.

The instrumentation system configuration at the beginning and end of the test was:

- Drybulb RTD Sensors: 15
- Dewpoint Temperature Sensors 6
- Precision Pressure Manometers 1
- Mass Flow Meters 1

Attachment 9, ILRT Instrumentation List provides a description of instrument identification numbers and locations. Attachments 10 and 11 provide the Temperature and Dewpoint Sensor Zone locations respectively.

3.4 Temperature Stabilization

The temperature stabilization period was begun after reaching a containment pressure of 58.98 psia . The containment atmosphere was allowed to stabilize for approximately 4 hours and 30 minutes. The latest rate of drybulb temperature change over the last hour of the stabilization was 0.012 °F. The average rate of change over the last four hours of the stabilization period was 0.106 °F, indicating a very stable containment atmosphere. This difference of 0.094 °F met the ANSI/ANS 56.8 requirement for temperature stabilization. Further, the Containment Air Mass versus Time plot, Attachment 12 and the Mass Point Sliding Leakage Plot, Attachment 13 indicated a linear relationship confirming containment atmosphere stability.

3.5 As Left Containment Type A Test

The Type A Test was begun at 0745 hours on September 20, 1993. Based on the Total Time Analysis Method, the test was declared over at 1545 hours on September 20, 1993. The following summarizes the as left containment test results:

3.5.1	Type B and C Pre Test Penalty Leakage for penetrations not vented/drained	0.04550 %/day
3.5.2	Type B and C Pre Test Penalty Leakage for penetrations isolated during the test	0.00000 %/day
3.5.3	Water Level Corrections	0.05506 %/day
3.5.4	Total Time UCL	0.15356 %/day

$$\text{Total Time Acceptance} = 3.5.1 + 3.5.2 + 3.5.3 + 3.5.4 \leq 0.75 L_a$$

$$= 0.25412 \text{ \%/day} \leq 1.50 \text{ \%/day}$$

Attachment 14 illustrates the Total Time calculated leakage rate and associated upper confidence limit over the test interval. Based on the above data, it was concluded that the as left containment leakage rate was stable, well below the acceptance criteria, and therefore the containment may be declared operable in accordance with the plant Technical Specifications.

3.6 As Found Containment Type A Test

As suggested by Reference 9, the Type A Test results should be compensated for the "as found" vs. "as left" leakages for all penetrations if Type B and C repairs and adjustments are made prior to the Type A Test. This correction was equal to 0.2567 %/day. The following summarizes the as found containment results:

3.6.1	As Left Total Time Leakage Rate	0.25412 %/day
3.6.2	As Found vs. as Left Leakage Correction	0.2567 %/day

$$\text{Total Time Acceptance} = 3.6.1 + 3.6.2 \leq 0.75 L_a$$

$$= 0.51082 \text{ \%/day} \leq 1.5 \text{ \%/day}$$

Based on the above test results, it was concluded that the as found containment leakage rate was well below the acceptance criteria.

3.7 Verification Test

The superimposed leakage verification test was started at 1630 hours on September 20, 1993. The superimposed leakage rate was 12.2 SCFM. A one-hour stabilization period was implemented in accordance with BN-TOP-1. The test was completed at 2130 hours on September 20, 1993. The following summarizes the verification test results:

3.7.1	Superimposed Leakage Rate (Lo)	1.97640 %/day
3.7.3	Composite Leakage Rate Total Time (Lc)	2.05236 %/day
3.7.5	Type A Test Leakage Rate Total Time (Lam)	0.08080 %/day

The Superimposed Leakage Verification is acceptable provided Lc falls within the following ranges:

$$(Lam + Lo - 0.25La) \leq Lc \leq (Lam + Lo + 0.25La)$$

3.7.6 Total Time Acceptance

$$(0.08080 + 1.97640 - 0.5) \leq 2.05236 \leq (0.08080 + 1.97640 + 0.5)$$

$$(1.55720) \leq 2.05236 \leq (2.55720)$$

Attachment 15 illustrates the verification test Total Time Composite Leakage Rate with respect to the upper and lower limits as a function of time. Based on the above data, it was concluded that the composite leakage rate was stable, well within the limits of the test, and therefore, the Type A Test instrumentation system was considered to be verified functional throughout the Type A Test.

3.8 Reduced Data

Attachment 16, ILRT Containment Air Mass Calculation Parameters, contains the reduced variables and mass calculations for the Type A Test. These values were determined from the raw data inputs.

4.0 LOCAL LEAKAGE RATE TESTS (Types B and C)

The Local Leakage Rate Tests (LLRT) of containment isolation valves and other containment penetrations were conducted as required by the methods described in Duane Arnold Surveillance Test Procedures.

In accordance with 10CFR50 Appendix J, Paragraph V.B., data for the Local Leakage Rate Tests are summarized in Attachments 17 and 18 of this report. The combined as-left leakage for all penetrations and valves subject to Type B and C tests in 1992 and 1993 were below the acceptance criteria of less than 0.60 La.

4.1 Leakage Penalties added to Type A Leakage

In accordance with 10CFR50 Appendix J, Section III A.1.d, certain systems penetrating the containment boundary were not vented and drained. In order to compute the appropriate Type A Test penalty to be applied to the upper confidence limit, an analysis of each affected penetration was performed based on minimum pathway leakage through each penetration. Based on this analysis, a total pretest penalty leakage of 0.04550 %/day was assigned. The following table summarizes this analysis:

Penetration Number	Description	Leakage SCCM
X 9A	Feedwater	29
X 9B	Feedwater	249
X 16A	Core Spray	20
X 16B	Core Spray	7
X 19	Drywell Floor Sump	603
X 23A	Drywell Cooling Inlet	594
X 23B	Drywell Cooling Inlet	1847
X 24A	Drywell Cooling Outlet	3287
X 24B	Drywell Cooling Outlet	901
X 36	CRD Return	54
X 40C	Jet Pump Sample	33
X 40D	Jet Pump Sample	14
X 41	Recirc Loop Sample	6
X 48	Drywell Equipment Sump	162
X 54	RBCCW Outlet	55
X 55	RBCCW Inlet	152
TOTAL		8013 SCCM (0.04550 %/day)

4.2 Water Level Corrections

The following water level corrections were assigned for the Type A Test:

Description	ft³
Reactor Vessel	-18.744
Drywell Equipment Sump	+60.825
Drywell Floor Sump	+0.134
Torus Water Level	0.0
TOTAL	42.215 ft³ (0.05506 %/day)

4.3 Total Corrections 0.10056 %/day

TABLE A
TEST SETUP DATA

DRY BULB			DEW POINT			PRESSURE		
SENSOR NUMBER	SENSOR NAME	VOLUME FRACTION	SENSOR NUMBER	SENSOR NAME	VOLUME FRACTION	SENSOR NUMBER	SENSOR NAME	VOLUME FRACTION
1	TE4328A	0.112200	1	ME4326A	0.110000	1	PI-4368A	1.000000
2	TE4328B	0.112300	2	ME4326B	0.197000	2	PI-4368B	0.000000
3	TE4328C	0.112200	3	ME4326C	0.136000	3		0.000000
4	TE4328D	0.112300	4	ME4326D	0.108000			
5	TE4328E	0.055000	5	ME4326E	0.224500			
6	TE4328F	0.055000	6	ME4326F	0.224500		TOTAL	1.000000
7	TE4328G	0.065000	7		0.000000			
8	TE4328H	0.066000	8		0.000000			
9	TE4328J	0.055000	9		0.000000			
10	TE4328K	0.055000	10		0.000000			
11	TE4328L	0.040000	11		0.000000			
12	TE4328M	0.027000	12		0.000000			
13	TE4328N	0.066000	13		0.000000			
14	TE4328P	0.030000	14		0.000000			
15	TE4328Q	0.037000	15		0.000000			
16		0.000000	16		0.000000			
17		0.000000	17		0.000000			
18		0.000000	18		0.000000			
19		0.000000						
20		0.000000						
21		0.000000		TOTAL	1.000000			
22		0.000000						
23		0.000000						
24		0.000000						
25		0.000000						
26		0.000000						
27		0.000000						
28		0.000000						
29		0.000000						
30		0.000000						

TOTAL 1.000000

DRY BULB SYSTEM SENSITIVITY (e_T) = 0.01000000
DRY BULB SENSOR ACCURACY (E_T) = 0.100

DEW POINT SYSTEM SENSITIVITY (e_{p_v}) = 0.01000000
DEW POINT SENSOR ACCURACY (E_{p_v}) = 0.500

PRESSURE SYSTEM SENSITIVITY (e_p) = 0.00050000
PRESSURE SENSOR ACCURACY (E_p) = 0.001

MAXIMUM ALLOWABLE LEAKAGE RATE, L_a (% per day) = 2.000

PEAK CONTAINMENT INTERNAL PRESSURE, P_{ac} (psia) = 57.700

VERIFICATION FLOW CONVERSION FACTOR (% per day/SCFM) = 0.16200

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
1	09/19/93:17:57:00	77.78900	77.74300	77.54300	77.65500	74.88300	74.82000
2	09/19/93:18:12:00	78.73100	78.64400	78.53800	78.70200	75.29600	74.96000
3	09/19/93:18:27:00	79.41500	79.48800	79.35100	79.50100	75.65200	75.54300
4	09/19/93:18:42:00	79.73000	79.83400	79.67700	79.82600	75.82600	75.78200
5	09/19/93:18:57:00	79.95600	80.07400	79.90500	80.02000	75.96700	75.52300
6	09/19/93:19:12:00	80.35700	80.47400	80.33700	80.37700	76.23900	75.53400
7	09/19/93:19:27:00	80.55200	80.68000	80.50000	80.59400	76.46800	75.70600
8	09/19/93:19:42:00	81.61400	81.73000	81.65900	81.69500	77.01000	76.46200
9	09/19/93:19:57:00	82.20100	82.39100	82.25500	82.33200	77.31400	76.86200
10	09/19/93:20:12:00	82.48200	82.64000	82.57000	82.62500	77.50900	76.85300
11	09/19/93:20:27:00	82.68900	82.88900	82.79800	82.88500	77.67200	77.05900
12	09/19/93:20:42:00	82.87400	83.06400	82.98200	83.01400	77.91000	77.02500
13	09/19/93:20:57:00	83.03300	83.21100	83.12900	83.16100	78.00300	77.22600
14	09/19/93:21:12:00	83.14400	83.33300	83.29700	83.28500	78.13900	77.33900
15	09/19/93:21:27:00	83.29600	83.42100	83.36200	83.38200	78.20300	77.47000
16	09/19/93:21:42:00	83.40500	83.55000	83.47100	83.49900	78.33500	77.79300
17	09/19/93:21:57:00	83.52500	83.63600	83.63200	83.56500	78.43200	77.97800
18	09/19/93:22:12:00	83.61100	83.71300	83.69700	83.67300	78.53000	78.21500
19	09/19/93:22:27:00	83.68800	83.76800	83.79500	83.75900	78.65900	78.32400
20	09/19/93:22:42:00	83.77400	83.86500	83.88100	83.85600	78.76800	78.44100
21	09/19/93:22:57:00	83.82900	83.92000	83.92600	83.93300	78.89900	78.62700
22	09/19/93:23:12:00	83.89400	83.97400	84.00100	83.96500	79.02900	78.73500
23	09/19/93:23:27:00	83.99200	84.06000	84.12100	84.10500	79.16900	79.03800
24	09/19/93:23:42:00	84.17500	84.25500	84.33800	84.29000	79.38700	79.11200
25	09/19/93:23:57:00	84.27300	84.34300	84.40200	84.38700	79.48500	79.30700
26	09/20/93:00:12:00	84.36100	84.41800	84.46800	84.45200	79.64800	79.61000
27	09/20/93:00:27:00	84.40400	84.47200	84.51100	84.52700	79.74600	79.71800
28	09/20/93:00:42:00	84.43600	84.49500	84.55300	84.56100	79.90900	79.76100
29	09/20/93:00:57:00	84.47900	84.52600	84.57600	84.58100	80.02900	79.92400
30	09/20/93:01:12:00	84.51300	84.56900	84.64200	84.63500	80.14700	80.11800
31	09/20/93:01:27:00	84.53400	84.59200	84.65100	84.65800	80.22400	80.14100
32	09/20/93:01:42:00	84.54500	84.59200	84.66200	84.66700	80.32200	80.30300
33	09/20/93:01:57:00	84.02300	84.07100	84.02400	84.04100	80.11600	80.19500
34	09/20/93:02:12:00	83.68800	83.73600	83.68600	83.71600	80.17000	80.17200
35	09/20/93:02:27:00	83.25300	83.29000	83.18800	83.21900	80.12700	79.94600
36	09/20/93:02:42:00	82.84000	82.88900	82.76400	82.80800	80.12700	79.79500
37	09/20/93:02:50:35	82.71800	82.74400	82.62000	82.66400	80.18800	79.79000
38	09/20/93:03:00:00	82.33000	82.32600	82.22300	82.26900	80.03800	79.61000
39	09/20/93:03:05:00	82.11500	82.13100	81.98600	82.06300	79.98600	79.53500
40	09/20/93:03:10:00	81.92000	81.96800	81.81100	81.90100	79.96400	79.51200

TABLE B

DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	7	8	9	10	11	12
1	09/19/93:17:57:00	77.59800	77.47000	78.98700	78.98600	101.33000	73.51300
2	09/19/93:18:12:00	78.27800	77.91400	79.35500	79.25600	101.83000	73.96700
3	09/19/93:18:27:00	78.53800	78.20900	79.72400	79.54700	102.21000	74.34400
4	09/19/93:18:42:00	78.61500	78.36900	79.99300	79.69800	102.39000	74.50700
5	09/19/93:18:57:00	78.82100	78.53300	80.13500	79.90300	102.63000	74.78900
6	09/19/93:19:12:00	79.03600	78.84800	80.40400	80.09700	102.88000	75.03800
7	09/19/93:19:27:00	79.16700	79.12000	80.36100	80.27000	103.23000	75.06900
8	09/19/93:19:42:00	79.88100	79.73900	81.21600	80.65800	103.80000	75.67500
9	09/19/93:19:57:00	80.15000	80.03100	81.41000	81.00500	104.24000	75.84900
10	09/19/93:20:12:00	80.34700	80.40100	81.70400	81.30700	104.54000	75.96600
11	09/19/93:20:27:00	80.51900	80.61600	81.88700	81.57600	104.86000	76.11800
12	09/19/93:20:42:00	80.67100	80.81100	82.11600	81.80300	105.08000	76.30300
13	09/19/93:20:57:00	80.88300	81.00400	82.30600	82.01500	105.31000	76.45000
14	09/19/93:21:12:00	80.99600	81.22400	82.57900	82.24500	105.49000	76.57200
15	09/19/93:21:27:00	81.15900	81.39800	82.71000	82.42800	105.81000	76.73500
16	09/19/93:21:42:00	81.31100	81.57300	82.86200	82.64400	106.02000	76.84300
17	09/19/93:21:57:00	81.47100	81.78900	83.01300	82.82900	106.28000	77.01700
18	09/19/93:22:12:00	81.61400	81.98400	83.26200	83.02300	106.45000	77.18900
19	09/19/93:22:27:00	81.73100	82.12700	83.40200	83.18600	106.75000	77.34000
20	09/19/93:22:42:00	81.87400	82.29000	83.57700	83.26000	106.93000	77.52600
21	09/19/93:22:57:00	82.00300	82.49400	83.71700	83.41100	107.11000	77.66600
22	09/19/93:23:12:00	82.14300	82.64600	83.90000	83.61700	107.35000	77.83800
23	09/19/93:23:27:00	82.31700	82.86400	84.09700	83.77900	107.50000	78.06600
24	09/19/93:23:42:00	82.52300	83.05900	84.30300	84.05000	107.76000	78.24900
25	09/19/93:23:57:00	82.64100	83.27700	84.55100	84.26400	107.97000	78.41200
26	09/20/93:00:12:00	82.78300	83.42900	84.73500	84.44900	108.01000	78.58600
27	09/20/93:00:27:00	82.91200	83.56900	84.92900	84.64300	108.24000	78.74900
28	09/20/93:00:42:00	83.04400	83.74400	85.10300	84.82600	108.46000	78.92000
29	09/20/93:00:57:00	83.17300	83.88400	85.24400	85.03100	108.54000	79.08300
30	09/20/93:01:12:00	83.31300	84.04800	85.41800	85.20500	108.80000	79.25700
31	09/20/93:01:27:00	83.43300	84.18900	85.61200	85.44100	108.94000	79.40900
32	09/20/93:01:42:00	83.57300	84.34100	85.77500	85.61500	108.96000	79.56900
33	09/20/93:01:57:00	83.35600	84.09100	85.65500	85.48400	108.95000	79.40900
34	09/20/93:02:12:00	83.39000	84.11400	85.60100	85.52700	109.13000	79.50600
35	09/20/93:02:27:00	83.21600	83.99300	85.48100	85.47300	109.15000	79.38600
36	09/20/93:02:42:00	83.19500	83.98200	85.47200	85.51800	109.22000	79.38600
37	09/20/93:02:50:35	83.20000	84.01200	85.51100	85.55700	109.26000	79.41300
38	09/20/93:03:00:00	82.97800	83.85300	85.40700	85.44100	109.31000	79.24600
39	09/20/93:03:05:00	82.94400	83.79800	85.38400	85.43000	109.25000	79.21200
40	09/20/93:03:10:00	82.90100	83.77600	85.37300	85.44100	109.37000	79.21200

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	13	14	15	16	17	18
1	09/19/93:17:57:00	77.69000	84.65100	95.85900	0.00000	0.00000	0.00000
2	09/19/93:18:12:00	78.23500	84.95400	96.25200	0.00000	0.00000	0.00000
3	09/19/93:18:27:00	78.65800	85.29900	96.53400	0.00000	0.00000	0.00000
4	09/19/93:18:42:00	78.91900	85.55900	96.82700	0.00000	0.00000	0.00000
5	09/19/93:18:57:00	79.12500	85.86200	97.23000	0.00000	0.00000	0.00000
6	09/19/93:19:12:00	79.36600	86.19700	97.41600	0.00000	0.00000	0.00000
7	09/19/93:19:27:00	79.57300	86.48800	97.85100	0.00000	0.00000	0.00000
8	09/19/93:19:42:00	80.22500	87.04200	98.54900	0.00000	0.00000	0.00000
9	09/19/93:19:57:00	80.56100	87.53900	98.94000	0.00000	0.00000	0.00000
10	09/19/93:20:12:00	80.82200	88.04800	99.31100	0.00000	0.00000	0.00000
11	09/19/93:20:27:00	81.04000	88.41400	99.58100	0.00000	0.00000	0.00000
12	09/19/93:20:42:00	81.23600	88.86000	99.99500	0.00000	0.00000	0.00000
13	09/19/93:20:57:00	81.43800	89.33200	100.25000	0.00000	0.00000	0.00000
14	09/19/93:21:12:00	81.57200	89.70300	100.57000	0.00000	0.00000	0.00000
15	09/19/93:21:27:00	81.71500	90.12600	100.94000	0.00000	0.00000	0.00000
16	09/19/93:21:42:00	81.88800	90.49500	101.25000	0.00000	0.00000	0.00000
17	09/19/93:21:57:00	82.02000	90.90400	101.55000	0.00000	0.00000	0.00000
18	09/19/93:22:12:00	82.21500	91.35000	101.73000	0.00000	0.00000	0.00000
19	09/19/93:22:27:00	82.34500	91.68500	102.03000	0.00000	0.00000	0.00000
20	09/19/93:22:42:00	82.47600	92.08500	102.24000	0.00000	0.00000	0.00000
21	09/19/93:22:57:00	82.60600	92.55100	102.53000	0.00000	0.00000	0.00000
22	09/19/93:23:12:00	82.73800	92.96300	102.88000	0.00000	0.00000	0.00000
23	09/19/93:23:27:00	82.89000	93.34300	103.17000	0.00000	0.00000	0.00000
24	09/19/93:23:42:00	83.11700	93.65500	103.41000	0.00000	0.00000	0.00000
25	09/19/93:23:57:00	83.27000	94.06700	103.46000	0.00000	0.00000	0.00000
26	09/20/93:00:12:00	83.42200	94.59900	103.83000	0.00000	0.00000	0.00000
27	09/20/93:00:27:00	83.56300	95.00000	104.02000	0.00000	0.00000	0.00000
28	09/20/93:00:42:00	83.68300	95.42300	104.19000	0.00000	0.00000	0.00000
29	09/20/93:00:57:00	83.84700	95.72600	104.35000	0.00000	0.00000	0.00000
30	09/20/93:01:12:00	83.97700	96.05000	104.65000	0.00000	0.00000	0.00000
31	09/20/93:01:27:00	84.05400	96.38800	104.88000	0.00000	0.00000	0.00000
32	09/20/93:01:42:00	84.19500	96.69100	105.10000	0.00000	0.00000	0.00000
33	09/20/93:01:57:00	83.95600	96.86300	105.01000	0.00000	0.00000	0.00000
34	09/20/93:02:12:00	83.93300	97.01500	105.12000	0.00000	0.00000	0.00000
35	09/20/93:02:27:00	83.76100	97.17800	105.21000	0.00000	0.00000	0.00000
36	09/20/93:02:42:00	83.69500	97.37300	105.33000	0.00000	0.00000	0.00000
37	09/20/93:02:50:35	83.70200	97.49900	105.37000	0.00000	0.00000	0.00000
38	09/20/93:03:00:00	83.53100	97.51500	105.37000	0.00000	0.00000	0.00000
39	09/20/93:03:05:00	83.47600	97.55800	105.30000	0.00000	0.00000	0.00000
40	09/20/93:03:10:00	83.44500	97.64400	105.31000	0.00000	0.00000	0.00000

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
41	09/20/93:03:15:00	81.76600	81.81600	81.67100	81.76100	79.98600	79.49200
42	09/20/93:03:20:00	81.64800	81.68700	81.56200	81.64100	79.95200	79.48100
43	09/20/93:03:25:00	81.52800	81.57900	81.46500	81.54400	79.96400	79.48100
44	09/20/93:03:30:00	81.43100	81.48100	81.35600	81.42400	79.95200	79.46900
45	09/20/93:03:35:00	81.33400	81.38400	81.28100	81.33800	79.92000	79.45800
46	09/20/93:03:40:00	81.26300	81.30300	81.20000	81.25900	79.90500	79.45400
47	09/20/93:03:45:00	81.18800	81.22800	81.11400	81.17100	79.89300	79.46500
48	09/20/93:03:50:00	81.11600	81.14400	81.04100	81.09000	79.86600	79.44900
49	09/20/93:03:55:00	81.04100	81.05800	80.96700	81.01300	79.87700	79.45800
50	09/20/93:04:00:00	80.98700	81.00400	80.90100	80.95000	79.87700	79.44900
51	09/20/93:04:05:00	80.91000	80.93800	80.84700	80.89600	79.84300	79.44900
52	09/20/93:04:10:00	80.85500	80.87500	80.77200	80.83100	79.85500	79.43800
53	09/20/93:04:15:00	80.79200	80.80900	80.71800	80.75400	79.86600	79.43800
54	09/20/93:04:20:00	80.72600	80.75500	80.65200	80.70200	79.85500	79.43800
55	09/20/93:04:25:00	80.68300	80.70000	80.60900	80.64800	79.82300	79.42600
56	09/20/93:04:30:00	80.62900	80.64600	80.56600	80.59400	79.84300	79.42600
57	09/20/93:04:35:00	80.57500	80.59200	80.51200	80.55100	79.84300	79.43800
58	09/20/93:04:40:00	80.52700	80.54400	80.46400	80.50100	79.86100	79.44500
59	09/20/93:04:45:00	80.47300	80.50100	80.41000	80.44900	79.83900	79.43300
60	09/20/93:04:50:00	80.42300	80.46300	80.36900	80.40800	79.82300	79.42600
61	09/20/93:04:55:00	80.36800	80.40900	80.31700	80.35400	79.84300	79.53500
62	09/20/93:05:00:00	80.32500	80.35400	80.27200	80.30000	79.84300	79.49200
63	09/20/93:05:05:00	80.28200	80.32300	80.22900	80.26800	79.82300	79.42600
64	09/20/93:05:10:00	80.23900	80.27700	80.18600	80.23700	79.82300	79.46900
65	09/20/93:05:15:00	80.19400	80.22500	80.15400	80.20300	79.82300	79.48100
66	09/20/93:05:20:00	80.15100	80.19100	80.11100	80.14900	79.83200	79.42600
67	09/20/93:05:25:00	80.11900	80.14800	80.06600	80.11700	79.84300	79.46900
68	09/20/93:05:30:00	80.07600	80.11700	80.02300	80.07400	79.82300	79.55500
69	09/20/93:05:35:00	80.03300	80.08300	79.98000	80.04300	79.85500	79.50100
70	09/20/93:05:40:00	80.01000	80.04000	79.95900	80.00900	79.87700	79.49200
71	09/20/93:05:45:00	79.96700	80.00800	79.92500	79.96600	79.86600	79.46900
72	09/20/93:05:50:00	79.93300	79.97400	79.88200	79.93400	79.88600	79.57800
73	09/20/93:05:55:00	79.90200	79.95400	79.86000	79.89200	79.88600	79.55500
74	09/20/93:06:00:00	79.87000	79.91100	79.82800	79.86900	79.89800	79.45800
75	09/20/93:06:05:00	79.82700	79.88800	79.79700	79.84600	79.92000	79.45800
76	09/20/93:06:10:00	79.81100	79.86300	79.76900	79.81000	79.92700	79.43300
77	09/20/93:06:15:00	79.77900	79.82900	79.73800	79.77900	79.93600	79.47600
78	09/20/93:06:20:00	79.73900	79.80200	79.69900	79.74900	79.96400	79.39500
79	09/20/93:06:25:00	79.70700	79.76800	79.66500	79.71800	79.96400	79.41500
80	09/20/93:06:30:00	79.68400	79.74800	79.64500	79.68600	79.97500	79.39500

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	7	8	9	10	11	12
41	09/20/93:03:15:00	82.88100	83.75500	85.38400	85.44100	109.42000	79.22300
42	09/20/93:03:20:00	82.88100	83.74400	85.39500	85.45300	109.42000	79.21200
43	09/20/93:03:25:00	82.88100	83.73200	85.40700	85.47300	109.47000	79.20300
44	09/20/93:03:30:00	82.88100	83.73200	85.40700	85.47300	109.48000	79.20300
45	09/20/93:03:35:00	82.88100	83.73200	85.41800	85.50700	109.60000	79.22300
46	09/20/93:03:40:00	82.87600	83.75100	85.43400	85.52300	109.63000	79.21000
47	09/20/93:03:45:00	82.88700	83.73900	85.45600	85.53400	109.64000	79.18700
48	09/20/93:03:50:00	82.88100	83.73200	85.47200	85.55000	109.62000	79.20300
49	09/20/93:03:55:00	82.89200	83.73200	85.50400	85.56100	109.69000	79.22300
50	09/20/93:04:00:00	82.89200	83.74400	85.50400	85.58100	109.84000	79.24600
51	09/20/93:04:05:00	82.88100	83.77600	85.51500	85.59300	109.83000	79.24600
52	09/20/93:04:10:00	82.88100	83.77600	85.54700	85.61500	109.90000	79.23500
53	09/20/93:04:15:00	82.89200	83.76700	85.59000	85.63500	109.91000	79.24600
54	09/20/93:04:20:00	82.89200	83.76700	85.59000	85.64700	109.86000	79.25700
55	09/20/93:04:25:00	82.91200	83.77600	85.62400	85.65800	109.93000	79.26600
56	09/20/93:04:30:00	82.91200	83.78700	85.63300	85.70100	109.94000	79.27800
57	09/20/93:04:35:00	82.92400	83.79800	85.66700	85.70100	110.08000	79.27800
58	09/20/93:04:40:00	82.93000	83.81600	85.69400	85.72800	110.00000	79.28500
59	09/20/93:04:45:00	82.94200	83.81600	85.70500	85.75100	110.05000	79.29600
60	09/20/93:04:50:00	82.93500	83.81000	85.69800	85.76600	110.04000	79.31200
61	09/20/93:04:55:00	82.94400	83.83000	85.76400	85.77500	110.07000	79.31200
62	09/20/93:05:00:00	82.94400	83.84100	85.76400	85.79800	110.07000	79.31200
63	09/20/93:05:05:00	82.95500	83.86400	85.79600	85.80900	110.13000	79.32100
64	09/20/93:05:10:00	82.97800	83.87300	85.83000	85.85200	110.16000	79.34300
65	09/20/93:05:15:00	82.98900	83.88400	85.85000	85.88400	110.29000	79.35500
66	09/20/93:05:20:00	82.98900	83.90700	85.88200	85.88400	110.36000	79.35500
67	09/20/93:05:25:00	83.01000	83.91900	85.91600	85.92600	110.44000	79.36400
68	09/20/93:05:30:00	83.02100	83.92800	85.93600	85.94900	110.55000	79.37500
69	09/20/93:05:35:00	83.03200	83.95000	85.97000	85.98100	110.59000	79.39800
70	09/20/93:05:40:00	83.04400	83.97300	86.00200	86.00300	110.67000	79.39800
71	09/20/93:05:45:00	83.05300	83.99300	86.02400	86.02600	110.86000	79.39800
72	09/20/93:05:50:00	83.06400	84.01600	86.04500	86.04600	110.80000	79.41800
73	09/20/93:05:55:00	83.06400	84.03700	86.07900	86.07800	110.94000	79.41800
74	09/20/93:06:00:00	83.09800	84.03700	86.11000	86.12300	110.96000	79.44100
75	09/20/93:06:05:00	83.09800	84.05900	86.11000	86.12300	111.11000	79.45200
76	09/20/93:06:10:00	83.11400	84.08600	86.13700	86.16100	111.19000	79.44700
77	09/20/93:06:15:00	83.13600	84.09800	86.17100	86.18100	111.22000	79.50200
78	09/20/93:06:20:00	83.14100	84.10200	86.19600	86.19700	111.28000	79.48400
79	09/20/93:06:25:00	83.15000	84.12500	86.23000	86.22000	111.27000	79.50600
80	09/20/93:06:30:00	83.16100	84.14500	86.25100	86.24000	111.33000	79.51500

TABLE B

DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	13	14	15	16	17	18
41	09/20/93:03:15:00	83.43300	97.63300	105.42000	0.00000	0.00000	0.00000
42	09/20/93:03:20:00	83.41100	97.71000	105.43000	0.00000	0.00000	0.00000
43	09/20/93:03:25:00	83.40100	97.75300	105.46000	0.00000	0.00000	0.00000
44	09/20/93:03:30:00	83.39000	97.82800	105.41000	0.00000	0.00000	0.00000
45	09/20/93:03:35:00	83.39000	97.87300	105.57000	0.00000	0.00000	0.00000
46	09/20/93:03:40:00	83.39700	97.98600	105.57000	0.00000	0.00000	0.00000
47	09/20/93:03:45:00	83.38600	98.02000	105.65000	0.00000	0.00000	0.00000
48	09/20/93:03:50:00	83.39000	98.05600	105.68000	0.00000	0.00000	0.00000
49	09/20/93:03:55:00	83.37900	98.09900	105.69000	0.00000	0.00000	0.00000
50	09/20/93:04:00:00	83.39000	98.14200	105.69000	0.00000	0.00000	0.00000
51	09/20/93:04:05:00	83.40100	98.19700	105.77000	0.00000	0.00000	0.00000
52	09/20/93:04:10:00	83.40100	98.27400	105.90000	0.00000	0.00000	0.00000
53	09/20/93:04:15:00	83.41100	98.30600	105.88000	0.00000	0.00000	0.00000
54	09/20/93:04:20:00	83.41100	98.31700	105.91000	0.00000	0.00000	0.00000
55	09/20/93:04:25:00	83.41100	98.39200	105.91000	0.00000	0.00000	0.00000
56	09/20/93:04:30:00	83.41100	98.45700	106.01000	0.00000	0.00000	0.00000
57	09/20/93:04:35:00	83.42200	98.46900	106.09000	0.00000	0.00000	0.00000
58	09/20/93:04:40:00	83.42900	98.53000	106.10000	0.00000	0.00000	0.00000
59	09/20/93:04:45:00	83.44000	98.57300	106.14000	0.00000	0.00000	0.00000
60	09/20/93:04:50:00	83.43300	98.62000	106.20000	0.00000	0.00000	0.00000
61	09/20/93:04:55:00	83.44500	98.65200	106.14000	0.00000	0.00000	0.00000
62	09/20/93:05:00:00	83.46500	98.64100	106.25000	0.00000	0.00000	0.00000
63	09/20/93:05:05:00	83.47600	98.71800	106.26000	0.00000	0.00000	0.00000
64	09/20/93:05:10:00	83.47600	98.74900	106.28000	0.00000	0.00000	0.00000
65	09/20/93:05:15:00	83.49900	98.83800	106.35000	0.00000	0.00000	0.00000
66	09/20/93:05:20:00	83.49900	98.91300	106.45000	0.00000	0.00000	0.00000
67	09/20/93:05:25:00	83.52000	98.97800	106.53000	0.00000	0.00000	0.00000
68	09/20/93:05:30:00	83.53100	99.04400	106.60000	0.00000	0.00000	0.00000
69	09/20/93:05:35:00	83.55400	99.15000	106.64000	0.00000	0.00000	0.00000
70	09/20/93:05:40:00	83.57400	99.20500	106.69000	0.00000	0.00000	0.00000
71	09/20/93:05:45:00	83.57400	99.29300	106.82000	0.00000	0.00000	0.00000
72	09/20/93:05:50:00	83.59700	99.31400	106.89000	0.00000	0.00000	0.00000
73	09/20/93:05:55:00	83.60800	99.43400	106.95000	0.00000	0.00000	0.00000
74	09/20/93:06:00:00	83.60800	99.46500	107.04000	0.00000	0.00000	0.00000
75	09/20/93:06:05:00	83.62900	99.54200	107.04000	0.00000	0.00000	0.00000
76	09/20/93:06:10:00	83.65800	99.62400	107.13000	0.00000	0.00000	0.00000
77	09/20/93:06:15:00	83.65800	99.69000	107.23000	0.00000	0.00000	0.00000
78	09/20/93:06:20:00	83.67200	99.73700	107.26000	0.00000	0.00000	0.00000
79	09/20/93:06:25:00	83.68300	99.83400	107.34000	0.00000	0.00000	0.00000
80	09/20/93:06:30:00	83.70600	99.82300	107.37000	0.00000	0.00000	0.00000

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
81	09/20/93:06:35:00	79.66400	79.72500	79.62200	79.66400	79.99500	79.48100
82	09/20/93:06:40:00	79.63000	79.69300	79.59100	79.63200	79.97500	79.44900
83	09/20/93:06:45:00	79.61000	79.68200	79.55700	79.62100	80.00700	79.45800
84	09/20/93:06:50:00	79.58200	79.64600	79.54300	79.58500	80.02500	79.45400
85	09/20/93:06:55:00	79.55100	79.63500	79.53200	79.56200	80.02500	79.43300
86	09/20/93:07:00:00	79.53300	79.59600	79.49300	79.53500	80.02900	79.45800
87	09/20/93:07:05:00	79.50100	79.56400	79.47100	79.50100	80.03800	79.43800
88	09/20/93:07:15:00	79.44600	79.51900	79.42800	79.45800	80.05000	79.48100
89	09/20/93:07:30:00	79.40300	79.45600	79.36200	79.39300	80.07200	79.53500
90	09/20/93:07:45:00	79.32600	79.40200	79.29900	79.33000	80.11600	79.57800
91	09/20/93:08:00:00	79.28300	79.34700	79.24400	79.27500	80.15900	79.64300
92	09/20/93:08:15:00	79.22900	79.29300	79.19000	79.22100	80.20200	79.68600
93	09/20/93:08:30:00	79.17500	79.23900	79.13600	79.17800	80.23600	79.71800
94	09/20/93:08:45:00	79.13200	79.18400	79.09300	79.12400	80.25600	79.75200
95	09/20/93:09:00:00	79.07700	79.14100	79.03800	79.08100	80.29900	79.78400
96	09/20/93:09:15:00	79.03400	79.08700	78.99500	79.03600	80.32200	79.80600
97	09/20/93:09:30:00	79.01400	79.05500	78.94100	78.99300	80.35400	79.83800
98	09/20/93:09:45:00	78.96900	79.01000	78.90700	78.95100	80.39700	79.85800
99	09/20/93:10:00:00	78.94800	78.95600	78.87500	78.92800	80.43100	79.89200
100	09/20/93:10:15:00	78.91600	78.93500	78.84100	78.88500	80.45100	79.92400
101	09/20/93:10:30:00	78.88200	78.90400	78.81000	78.86500	80.49700	79.94600
102	09/20/93:10:45:00	78.85100	78.87000	78.78900	78.84200	80.52900	79.97800
103	09/20/93:11:00:00	78.81700	78.83800	78.74400	78.81100	80.56000	80.01000
104	09/20/93:11:15:00	78.80800	78.80400	78.72400	78.78800	80.59400	80.04300
105	09/20/93:11:30:00	78.77400	78.77300	78.70100	78.75600	80.61500	80.07500
106	09/20/93:11:45:00	78.75300	78.75200	78.68100	78.74500	80.65800	80.10900
107	09/20/93:12:00:00	78.73800	78.73600	78.66500	78.72000	80.69900	80.15900
108	09/20/93:12:15:00	78.71000	78.70700	78.63800	78.69100	80.72400	80.18400
109	09/20/93:12:30:00	78.68300	78.68200	78.59900	78.67500	80.76200	80.21300
110	09/20/93:12:45:00	78.68300	78.67100	78.59900	78.66600	80.79600	80.25600
111	09/20/93:13:00:00	78.66100	78.66000	78.57900	78.65500	80.81700	80.28800
112	09/20/93:13:15:00	78.64500	78.64400	78.56100	78.62600	80.85300	80.31500
113	09/20/93:13:30:00	78.62200	78.62100	78.53800	78.60500	80.88700	80.34600
114	09/20/93:13:45:00	78.61100	78.59800	78.52900	78.59400	80.91900	80.38900
115	09/20/93:14:00:00	78.59000	78.59800	78.50700	78.57400	80.94200	80.41200
116	09/20/93:14:15:00	78.57900	78.57800	78.49500	78.55100	80.98500	80.44400
117	09/20/93:14:30:00	78.56800	78.56700	78.48600	78.54000	81.00500	80.47500
118	09/20/93:14:45:00	78.55900	78.54600	78.47500	78.52800	81.06000	80.50900
119	09/20/93:15:00:00	78.53600	78.54600	78.46400	78.51900	81.08200	80.52900
120	09/20/93:15:15:00	78.53600	78.53500	78.45200	78.50800	81.10500	80.57200

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	7	8	9	10	11	12
81	09/20/93:06:35:00	83.18400	84.15700	86.26200	86.26300	111.43000	79.52600
82	09/20/93:06:40:00	83.18400	84.16800	86.29400	86.28300	111.47000	79.51500
83	09/20/93:06:45:00	83.20400	84.17700	86.31600	86.30600	111.54000	79.52600
84	09/20/93:06:50:00	83.22200	84.20700	86.34300	86.33300	111.55000	79.54500
85	09/20/93:06:55:00	83.23400	84.22900	86.37700	86.34400	111.63000	79.56500
86	09/20/93:07:00:00	83.23800	84.22300	86.40200	86.37100	111.68000	79.59200
87	09/20/93:07:05:00	83.24900	84.23200	86.40200	86.40300	111.72000	79.59200
88	09/20/93:07:15:00	83.27000	84.26600	86.44500	86.45700	111.81000	79.61500
89	09/20/93:07:30:00	83.31300	84.32000	86.52200	86.52200	112.04000	79.62400
90	09/20/93:07:45:00	83.36700	84.34100	86.58800	86.57600	112.11000	79.68900
91	09/20/93:08:00:00	83.40100	84.40600	86.65100	86.64000	112.22000	79.72100
92	09/20/93:08:15:00	83.44400	84.43800	86.72800	86.72800	112.35000	79.75500
93	09/20/93:08:30:00	83.47600	84.47200	86.79400	86.80200	112.44000	79.78700
94	09/20/93:08:45:00	83.51900	84.52700	86.85700	86.85600	112.66000	79.80900
95	09/20/93:09:00:00	83.56200	84.57000	86.92300	86.93300	112.73000	79.84100
96	09/20/93:09:15:00	83.59600	84.61300	86.98800	86.98700	112.89000	79.87200
97	09/20/93:09:30:00	83.65000	84.65600	87.05200	87.05000	113.01000	79.89500
98	09/20/93:09:45:00	83.69300	84.69900	87.09700	87.11600	113.12000	79.91800
99	09/20/93:10:00:00	83.71300	84.74200	87.16000	87.19200	113.10000	79.96100
100	09/20/93:10:15:00	83.76800	84.77600	87.22600	87.25600	113.17000	79.98100
101	09/20/93:10:30:00	83.81100	84.81900	87.29100	87.32100	113.38000	80.01500
102	09/20/93:10:45:00	83.84500	84.87400	87.34600	87.37500	113.50000	80.04700
103	09/20/93:11:00:00	83.88800	84.89400	87.40900	87.44100	113.57000	80.05800
104	09/20/93:11:15:00	83.93100	84.94900	87.46300	87.49500	113.51000	80.10100
105	09/20/93:11:30:00	83.97400	84.99200	87.51800	87.55800	113.73000	80.12300
106	09/20/93:11:45:00	84.01700	85.03700	87.58300	87.60100	113.75000	80.13200
107	09/20/93:12:00:00	84.05700	85.09600	87.65600	87.67300	113.87000	80.18200
108	09/20/93:12:15:00	84.08200	85.13500	87.70300	87.73200	113.89000	80.24100
109	09/20/93:12:30:00	84.13200	85.15100	87.76400	87.79300	114.02000	80.27000
110	09/20/93:12:45:00	84.17500	85.22800	87.82800	87.86700	114.08000	80.32500
111	09/20/93:13:00:00	84.21800	85.27100	87.90500	87.90100	114.10000	80.34500
112	09/20/93:13:15:00	84.24500	85.30700	87.94100	87.96900	114.23000	80.39300
113	09/20/93:13:30:00	84.27700	85.35000	87.99500	88.02300	114.24000	80.43600
114	09/20/93:13:45:00	84.32000	85.38400	88.06100	88.07700	114.42000	80.46900
115	09/20/93:14:00:00	84.36500	85.41600	88.12400	88.15400	114.47000	80.50100
116	09/20/93:14:15:00	84.39700	85.45900	88.19000	88.20800	114.58000	80.52400
117	09/20/93:14:30:00	84.44000	85.51400	88.23300	88.25100	114.70000	80.56700
118	09/20/93:14:45:00	84.47100	85.55700	88.29900	88.31400	114.70000	80.57800
119	09/20/93:15:00:00	84.50500	85.57900	88.35300	88.38000	114.73000	80.59800
120	09/20/93:15:15:00	84.53700	85.63400	88.40700	88.44500	114.81000	80.64100

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	13	14	15	16	17	18
81	09/20/93:06:35:00	83.72700	99.90000	107.45000	0.00000	0.00000	0.00000
82	09/20/93:06:40:00	83.73800	99.97500	107.45000	0.00000	0.00000	0.00000
83	09/20/93:06:45:00	83.73800	100.02000	107.50000	0.00000	0.00000	0.00000
84	09/20/93:06:50:00	83.75600	100.06000	107.53000	0.00000	0.00000	0.00000
85	09/20/93:06:55:00	83.77600	100.10000	107.64000	0.00000	0.00000	0.00000
86	09/20/93:07:00:00	83.78100	100.25000	107.68000	0.00000	0.00000	0.00000
87	09/20/93:07:05:00	83.79200	100.24000	107.72000	0.00000	0.00000	0.00000
88	09/20/93:07:15:00	83.82400	100.36000	107.84000	0.00000	0.00000	0.00000
89	09/20/93:07:30:00	83.87900	100.50000	107.93000	0.00000	0.00000	0.00000
90	09/20/93:07:45:00	83.91300	100.65000	108.15000	0.00000	0.00000	0.00000
91	09/20/93:08:00:00	83.96500	100.85000	108.23000	0.00000	0.00000	0.00000
92	09/20/93:08:15:00	84.01100	100.94000	108.39000	0.00000	0.00000	0.00000
93	09/20/93:08:30:00	84.05400	101.13000	108.48000	0.00000	0.00000	0.00000
94	09/20/93:08:45:00	84.08600	101.22000	108.68000	0.00000	0.00000	0.00000
95	09/20/93:09:00:00	84.14000	101.36000	108.80000	0.00000	0.00000	0.00000
96	09/20/93:09:15:00	84.17200	101.50000	108.91000	0.00000	0.00000	0.00000
97	09/20/93:09:30:00	84.21800	101.62000	109.02000	0.00000	0.00000	0.00000
98	09/20/93:09:45:00	84.24900	101.83000	109.07000	0.00000	0.00000	0.00000
99	09/20/93:10:00:00	84.29300	101.89000	109.18000	0.00000	0.00000	0.00000
100	09/20/93:10:15:00	84.34700	102.01000	109.27000	0.00000	0.00000	0.00000
101	09/20/93:10:30:00	84.37900	102.12000	109.47000	0.00000	0.00000	0.00000
102	09/20/93:10:45:00	84.43300	102.22000	109.53000	0.00000	0.00000	0.00000
103	09/20/93:11:00:00	84.46800	102.33000	109.60000	0.00000	0.00000	0.00000
104	09/20/93:11:15:00	84.51100	102.42000	109.67000	0.00000	0.00000	0.00000
105	09/20/93:11:30:00	84.55400	102.59000	109.76000	0.00000	0.00000	0.00000
106	09/20/93:11:45:00	84.59700	102.68000	109.86000	0.00000	0.00000	0.00000
107	09/20/93:12:00:00	84.64700	102.79000	109.92000	0.00000	0.00000	0.00000
108	09/20/93:12:15:00	84.67400	102.89000	110.07000	0.00000	0.00000	0.00000
109	09/20/93:12:30:00	84.71300	103.01000	110.10000	0.00000	0.00000	0.00000
110	09/20/93:12:45:00	84.75600	103.10000	110.25000	0.00000	0.00000	0.00000
111	09/20/93:13:00:00	84.79900	103.16000	110.30000	0.00000	0.00000	0.00000
112	09/20/93:13:15:00	84.83600	103.28000	110.37000	0.00000	0.00000	0.00000
113	09/20/93:13:30:00	84.88100	103.37000	110.42000	0.00000	0.00000	0.00000
114	09/20/93:13:45:00	84.92400	103.48000	110.55000	0.00000	0.00000	0.00000
115	09/20/93:14:00:00	84.95600	103.60000	110.58000	0.00000	0.00000	0.00000
116	09/20/93:14:15:00	85.00000	103.68000	110.66000	0.00000	0.00000	0.00000
117	09/20/93:14:30:00	85.04300	103.76000	110.77000	0.00000	0.00000	0.00000
118	09/20/93:14:45:00	85.08800	103.85000	110.77000	0.00000	0.00000	0.00000
119	09/20/93:15:00:00	85.12000	103.99000	110.85000	0.00000	0.00000	0.00000
120	09/20/93:15:15:00	85.17500	104.09000	110.94000	0.00000	0.00000	0.00000

TABLE B

DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
121	09/20/93:15:30:00	78.51300	78.51200	78.43200	78.48600	81.13700	80.59500
122	09/20/93:15:45:00	78.52000	78.50800	78.42700	78.49200	81.19800	80.63300
123	09/20/93:16:00:00	78.49300	78.49200	78.40900	78.47400	81.21200	80.66000
124	09/20/93:16:15:00	78.49300	78.49200	78.39800	78.45400	81.23400	80.69200
125	09/20/93:16:30:00	78.45900	78.45800	78.37800	78.44300	81.25700	80.71500
126	09/20/93:16:45:00	78.45000	78.44700	78.36600	78.42000	81.30000	80.73500
127	09/20/93:17:00:00	78.43900	78.42600	78.34400	78.41100	81.32100	80.76900
128	09/20/93:17:15:00	78.42700	78.41500	78.33200	78.40000	81.36400	80.80100
129	09/20/93:17:30:00	78.41600	78.40400	78.32300	78.38900	81.40900	80.82300
130	09/20/93:17:45:00	78.40700	78.39500	78.32300	78.37700	81.43000	80.85500
131	09/20/93:18:00:00	78.39600	78.38300	78.30100	78.36800	81.46400	80.87500
132	09/20/93:18:15:00	78.39600	78.37200	78.28900	78.35700	81.48400	80.90900
133	09/20/93:18:30:00	78.37300	78.36100	78.28000	78.34600	81.51600	80.94100
134	09/20/93:18:45:00	78.38000	78.35600	78.27600	78.34100	81.55700	80.97900
135	09/20/93:19:00:00	78.36200	78.34100	78.25800	78.33400	81.58200	80.99500
136	09/20/93:19:15:00	78.35300	78.32900	78.25800	78.32300	81.60400	81.02700
137	09/20/93:19:30:00	78.34100	78.32900	78.24600	78.31400	81.64700	81.06100
138	09/20/93:19:45:00	78.34100	78.30700	78.24600	78.31400	81.67900	81.08100
139	09/20/93:20:00:00	78.33000	78.30700	78.23500	78.30300	81.70200	81.10400
140	09/20/93:20:15:00	78.32500	78.30200	78.23000	78.29800	81.74100	81.14200
141	09/20/93:20:30:00	78.31900	78.29500	78.21500	78.29200	81.75600	81.16900
142	09/20/93:20:45:00	78.31400	78.29300	78.21000	78.28700	81.81800	81.19600
143	09/20/93:21:00:00	78.30500	78.28200	78.19900	78.27600	81.82700	81.23000
144	09/20/93:21:15:00	78.29800	78.27500	78.19200	78.26000	81.86500	81.25500
145	09/20/93:21:30:00	78.27600	78.27500	78.18100	78.26000	81.89700	81.27800

TABLE B
DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	7	8	9	10	11	12
121	09/20/93:15:30:00	84.58000	85.67700	88.46200	88.48800	114.85000	80.69600
122	09/20/93:15:45:00	84.62100	85.72700	88.52300	88.56000	114.90000	80.71400
123	09/20/93:16:00:00	84.66800	85.77500	88.57900	88.61700	114.99000	80.75000
124	09/20/93:16:15:00	84.70000	85.78600	88.63400	88.66200	115.09000	80.77300
125	09/20/93:16:30:00	84.72300	85.84000	88.68800	88.72500	115.15000	80.76100
126	09/20/93:16:45:00	84.75400	85.87200	88.74200	88.77900	115.24000	80.80400
127	09/20/93:17:00:00	84.78600	85.90600	88.79700	88.83300	115.36000	80.83600
128	09/20/93:17:15:00	84.82000	85.94900	88.84000	88.88700	115.33000	80.84700
129	09/20/93:17:30:00	84.86300	85.98100	88.91700	88.94200	115.47000	80.87000
130	09/20/93:17:45:00	84.89500	86.02400	88.96000	88.99600	115.47000	80.89000
131	09/20/93:18:00:00	84.92900	86.05800	89.01400	89.06100	115.56000	80.93500
132	09/20/93:18:15:00	84.98100	86.10100	89.06800	89.11500	115.61000	80.94400
133	09/20/93:18:30:00	85.00300	86.15600	89.13400	89.17000	115.70000	80.99900
134	09/20/93:18:45:00	85.03300	86.19500	89.19300	89.24000	115.74000	81.03900
135	09/20/93:19:00:00	85.06900	86.23100	89.22000	89.28700	115.84000	81.07600
136	09/20/93:19:15:00	85.08900	86.27400	89.29500	89.35300	115.84000	81.10700
137	09/20/93:19:30:00	85.13200	86.30800	89.34000	89.39500	115.94000	81.14100
138	09/20/93:19:45:00	85.16600	86.34000	89.40300	89.45000	116.03000	81.15000
139	09/20/93:20:00:00	85.19800	86.39400	89.44600	89.50400	116.03000	81.18400
140	09/20/93:20:15:00	85.22700	86.43300	89.50800	89.57600	116.20000	81.21100
141	09/20/93:20:30:00	85.26400	86.46000	89.55500	89.61200	116.17000	81.22700
142	09/20/93:20:45:00	85.29100	86.52100	89.61600	89.67300	116.22000	81.29700
143	09/20/93:21:00:00	85.33600	86.55300	89.65900	89.73600	116.29000	81.28800
144	09/20/93:21:15:00	85.36100	86.58900	89.70700	89.77500	116.40000	81.33600
145	09/20/93:21:30:00	85.41500	86.62300	89.76100	89.82900	116.42000	81.36700

TABLE B

DRY BULB TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	13	14	15	16	17	18
121	09/20/93:15:30:00	85.17500	104.15000	111.03000	0.00000	0.00000	0.00000
122	09/20/93:15:45:00	85.23600	104.20000	111.09000	0.00000	0.00000	0.00000
123	09/20/93:16:00:00	85.27200	104.35000	111.21000	0.00000	0.00000	0.00000
124	09/20/93:16:15:00	85.29500	104.36000	111.22000	0.00000	0.00000	0.00000
125	09/20/93:16:30:00	85.34700	104.46000	111.26000	0.00000	0.00000	0.00000
126	09/20/93:16:45:00	85.37000	104.61000	111.42000	0.00000	0.00000	0.00000
127	09/20/93:17:00:00	85.40200	104.61000	111.42000	0.00000	0.00000	0.00000
128	09/20/93:17:15:00	85.44700	104.72000	111.51000	0.00000	0.00000	0.00000
129	09/20/93:17:30:00	85.47900	104.85000	111.62000	0.00000	0.00000	0.00000
130	09/20/93:17:45:00	85.52200	104.96000	111.64000	0.00000	0.00000	0.00000
131	09/20/93:18:00:00	85.56600	104.99000	111.75000	0.00000	0.00000	0.00000
132	09/20/93:18:15:00	85.60000	105.09000	111.78000	0.00000	0.00000	0.00000
133	09/20/93:18:30:00	85.62000	105.13000	111.87000	0.00000	0.00000	0.00000
134	09/20/93:18:45:00	85.67000	105.21000	111.90000	0.00000	0.00000	0.00000
135	09/20/93:19:00:00	85.69800	105.39000	112.02000	0.00000	0.00000	0.00000
136	09/20/93:19:15:00	85.74100	105.46000	112.06000	0.00000	0.00000	0.00000
137	09/20/93:19:30:00	85.77300	105.53000	112.06000	0.00000	0.00000	0.00000
138	09/20/93:19:45:00	85.80400	105.54000	112.19000	0.00000	0.00000	0.00000
139	09/20/93:20:00:00	85.83800	105.61000	112.26000	0.00000	0.00000	0.00000
140	09/20/93:20:15:00	85.88900	105.77000	112.28000	0.00000	0.00000	0.00000
141	09/20/93:20:30:00	85.91400	105.81000	112.29000	0.00000	0.00000	0.00000
142	09/20/93:20:45:00	85.96400	105.88000	112.46000	0.00000	0.00000	0.00000
143	09/20/93:21:00:00	85.98600	105.92000	112.48000	0.00000	0.00000	0.00000
144	09/20/93:21:15:00	86.01100	106.00000	112.49000	0.00000	0.00000	0.00000
145	09/20/93:21:30:00	86.05700	106.21000	112.62000	0.00000	0.00000	0.00000

TABLE C
DEW POINT TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
1	09/19/93:17:57:00	71.69300	69.68700	71.61800	71.76700	77.78900	77.54300
2	09/19/93:18:12:00	72.05300	70.54700	70.31500	71.98500	78.73100	78.53800
3	09/19/93:18:27:00	71.99900	70.58800	67.91500	72.27100	79.41500	79.35100
4	09/19/93:18:42:00	71.82200	70.24700	66.84000	72.06700	79.73000	79.67700
5	09/19/93:18:57:00	71.60400	69.86500	68.53100	71.65200	79.95600	79.90500
6	09/19/93:19:12:00	71.43400	69.72100	67.29900	71.45400	80.35700	80.33700
7	09/19/93:19:27:00	71.17500	69.36600	67.23700	71.26300	80.55200	80.50000
8	09/19/93:19:42:00	71.27000	69.30400	64.96300	71.69300	81.61400	81.65900
9	09/19/93:19:57:00	71.03200	69.10600	64.42900	71.39300	82.20100	82.25500
10	09/19/93:20:12:00	70.65000	68.70900	63.39600	70.91600	82.48200	82.57000
11	09/19/93:20:27:00	70.47900	68.50400	64.46300	70.59500	82.68900	82.79800
12	09/19/93:20:42:00	70.38400	68.26400	64.29200	70.40400	82.87400	82.98200
13	09/19/93:20:57:00	70.19300	68.14100	63.79300	70.34300	83.03300	83.12900
14	09/19/93:21:12:00	69.98100	67.99100	64.49100	70.22000	83.14400	83.29700
15	09/19/93:21:27:00	70.03500	67.98400	64.61400	70.02200	83.29600	83.36200
16	09/19/93:21:42:00	70.09000	67.84000	63.51900	70.00100	83.40500	83.47100
17	09/19/93:21:57:00	69.93300	67.85400	63.23900	70.18600	83.52500	83.63200
18	09/19/93:22:12:00	70.10400	67.79900	62.64400	70.08300	83.61100	83.69700
19	09/19/93:22:27:00	70.00800	67.99100	63.24600	69.87800	83.68800	83.79500
20	09/19/93:22:42:00	70.12400	68.10000	63.55300	70.21300	83.77400	83.88100
21	09/19/93:22:57:00	70.13100	68.27100	62.27300	70.01500	83.82900	83.92600
22	09/19/93:23:12:00	70.51300	68.51800	63.55300	70.12400	83.89400	84.00100
23	09/19/93:23:27:00	70.21300	68.56500	64.53900	70.37300	83.99200	84.12100
24	09/19/93:23:42:00	70.72500	68.64800	64.27200	70.66300	84.17500	84.33800
25	09/19/93:23:57:00	70.73900	68.97600	64.56600	71.19500	84.27300	84.40200
26	09/20/93:00:12:00	70.95700	69.20900	64.81900	72.14800	84.36100	84.46800
27	09/20/93:00:27:00	71.19500	69.66700	64.89500	72.21600	84.40400	84.51100
28	09/20/93:00:42:00	71.49500	69.46800	64.53900	72.42700	84.43600	84.55300
29	09/20/93:00:57:00	71.71300	69.88500	65.98400	72.85500	84.47900	84.57600
30	09/20/93:01:12:00	72.22300	69.88500	65.86700	73.00400	84.51300	84.64200
31	09/20/93:01:27:00	72.06700	70.32900	65.61400	72.64500	84.53400	84.65100
32	09/20/93:01:42:00	72.38000	70.54700	66.12100	73.32300	84.54500	84.66200
33	09/20/93:01:57:00	72.17600	70.27400	67.06600	72.91600	84.02300	84.02400
34	09/20/93:02:12:00	72.09400	70.44500	67.72400	72.79400	83.68800	83.68600
35	09/20/93:02:27:00	72.00600	70.21300	67.94900	72.50200	83.25300	83.18800
36	09/20/93:02:42:00	71.82200	70.26100	69.72100	72.69200	82.84000	82.76400
37	09/20/93:02:50:35	72.01900	70.15800	69.79000	73.01800	82.71800	82.62000
38	09/20/93:03:00:00	71.91700	69.90600	71.77400	72.22300	82.33000	82.22300
39	09/20/93:03:05:00	71.91000	70.22300	71.30400	72.93000	82.11500	81.98600
40	09/20/93:03:10:00	71.91000	70.34300	71.20900	72.76000	81.92000	81.81100

TABLE C
DEW POINT TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
41	09/20/93:03:15:00	71.85600	69.85800	71.89700	72.66500	81.76600	81.67100
42	09/20/93:03:20:00	71.85600	70.19300	72.19600	72.66500	81.64800	81.56200
43	09/20/93:03:25:00	71.83600	70.03500	72.17600	72.27800	81.52800	81.46500
44	09/20/93:03:30:00	71.78800	70.20600	72.57700	72.79400	81.43100	81.35600
45	09/20/93:03:35:00	71.98500	69.79600	72.68500	72.66500	81.33400	81.28100
46	09/20/93:03:40:00	71.99900	69.75500	72.81400	72.95000	81.26300	81.20000
47	09/20/93:03:45:00	71.93100	70.08300	72.93600	72.76700	81.18800	81.11400
48	09/20/93:03:50:00	72.14200	69.94000	72.70600	72.07400	81.11600	81.04100
49	09/20/93:03:55:00	72.14200	70.09000	72.77400	72.90300	81.04100	80.96700
50	09/20/93:04:00:00	72.23700	70.04900	72.59700	72.80800	80.98700	80.90100
51	09/20/93:04:05:00	72.21600	70.18600	72.83500	73.01100	80.91000	80.84700
52	09/20/93:04:10:00	72.23700	70.26100	72.74600	72.43400	80.85500	80.77200
53	09/20/93:04:15:00	72.50900	70.45900	72.91600	73.18700	80.79200	80.71800
54	09/20/93:04:20:00	72.36600	70.20600	72.95000	72.54900	80.72600	80.65200
55	09/20/93:04:25:00	72.46100	70.54700	72.79400	73.07200	80.68300	80.60900
56	09/20/93:04:30:00	72.50200	70.49300	72.73300	72.84800	80.62900	80.56600
57	09/20/93:04:35:00	72.61700	70.53400	72.86900	73.25500	80.57500	80.51200
58	09/20/93:04:40:00	72.70600	70.54700	72.80800	72.98400	80.52700	80.46400
59	09/20/93:04:45:00	72.70600	70.54700	72.80800	72.98400	80.47300	80.41000
60	09/20/93:04:50:00	72.67200	70.36300	72.82800	72.61100	80.42300	80.36900
61	09/20/93:04:55:00	72.71900	70.50700	72.71900	73.54000	80.36800	80.31700
62	09/20/93:05:00:00	72.74600	70.30200	72.90900	73.24200	80.32500	80.27200
63	09/20/93:05:05:00	72.89600	70.90200	72.95000	73.62800	80.28200	80.22900
64	09/20/93:05:10:00	72.88200	71.10000	72.23500	73.35700	80.23900	80.18600
65	09/20/93:05:15:00	72.91600	70.79300	72.90300	73.09900	80.19400	80.15400
66	09/20/93:05:20:00	72.86900	70.34300	72.96400	73.23500	80.15100	80.11100
67	09/20/93:05:25:00	72.99100	70.63600	72.76700	73.39800	80.11900	80.06600
68	09/20/93:05:30:00	73.00400	70.96400	73.15400	73.81100	80.07600	80.02300
69	09/20/93:05:35:00	72.98400	70.73900	72.98400	73.54000	80.03300	79.98000
70	09/20/93:05:40:00	73.01800	70.79300	73.16000	73.77000	80.01000	79.95900
71	09/20/93:05:45:00	73.14000	71.10700	73.16000	73.77000	79.96700	79.92500
72	09/20/93:05:50:00	73.09300	71.03200	73.28200	73.48600	79.93300	79.88200
73	09/20/93:05:55:00	73.14700	71.25000	73.35000	73.30000	79.90200	79.86000
74	09/20/93:06:00:00	73.12600	71.25000	73.38400	73.85800	79.87000	79.82800
75	09/20/93:06:05:00	73.24200	71.01100	73.17400	73.84500	79.82700	79.79700
76	09/20/93:06:10:00	73.22800	71.02500	73.23200	73.98000	79.81100	79.76900
77	09/20/93:06:15:00	73.22800	71.17500	73.35700	73.91900	79.77900	79.73800
78	09/20/93:06:20:00	73.30300	71.06600	73.24800	73.91200	79.73900	79.69900
79	09/20/93:06:25:00	73.38400	71.11400	73.36400	74.33800	79.70700	79.66500
80	09/20/93:06:30:00	73.44500	71.35200	73.47200	74.09500	79.68400	79.64500

TABLE C
DEW POINT TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
81	09/20/93:06:35:00	73.43100	71.40700	73.52600	74.07400	79.66400	79.62200
82	09/20/93:06:40:00	73.45200	71.28400	73.52600	74.09500	79.63000	79.59100
83	09/20/93:06:45:00	73.45200	71.28400	73.52600	74.09500	79.61000	79.55700
84	09/20/93:06:50:00	73.46500	71.44100	73.56700	74.02000	79.58200	79.54300
85	09/20/93:06:55:00	73.58700	71.22900	73.48600	73.54000	79.55100	79.53200
86	09/20/93:07:00:00	73.55300	71.48200	73.58100	73.98700	79.53300	79.49300
87	09/20/93:07:05:00	73.59400	71.42700	72.56700	74.46000	79.50100	79.47100
88	09/20/93:07:15:00	73.72300	71.50900	73.68900	74.14200	79.44600	79.42800
89	09/20/93:07:30:00	73.82400	71.66500	73.96600	74.01400	79.40300	79.36200
90	09/20/93:07:45:00	73.84500	71.65900	73.87200	74.34500	79.32600	79.29900
91	09/20/93:08:00:00	74.02000	71.80200	74.25000	74.66900	79.28300	79.24400
92	09/20/93:08:15:00	74.06100	72.14800	74.29100	74.22300	79.22900	79.19000
93	09/20/93:08:30:00	74.23000	72.25000	74.31100	74.80400	79.17500	79.13600
94	09/20/93:08:45:00	74.28400	72.31800	74.58100	74.65500	79.13200	79.09300
95	09/20/93:09:00:00	74.34500	72.46800	74.49300	74.52000	79.07700	79.03800
96	09/20/93:09:15:00	74.41200	72.38000	74.59500	75.33600	79.03400	78.99500
97	09/20/93:09:30:00	74.60100	72.52900	74.55400	75.34300	79.01400	78.94100
98	09/20/93:09:45:00	74.59500	72.37300	74.62800	74.96600	78.96900	78.90700
99	09/20/93:10:00:00	74.72300	72.76000	74.74300	74.94500	78.94800	78.87500
100	09/20/93:10:15:00	74.80400	72.71900	74.85100	75.34900	78.91600	78.84100
101	09/20/93:10:30:00	74.87800	73.07200	74.89800	75.41700	78.88200	78.81000
102	09/20/93:10:45:00	74.95900	73.03800	75.03300	75.57800	78.85100	78.78900
103	09/20/93:11:00:00	75.11400	72.88900	74.97900	75.62500	78.81700	78.74400
104	09/20/93:11:15:00	75.16100	73.40400	75.06700	76.10200	78.80800	78.72400
105	09/20/93:11:30:00	75.23500	73.32300	75.08700	76.16900	78.77400	78.70100
106	09/20/93:11:45:00	75.36300	73.00400	75.22200	75.71300	78.75300	78.68100
107	09/20/93:12:00:00	75.45000	73.62800	75.26200	75.91400	78.73800	78.66500
108	09/20/93:12:15:00	75.52400	73.52000	75.30900	76.14900	78.71000	78.63800
109	09/20/93:12:30:00	75.57800	73.35700	75.40300	76.28300	78.68300	78.59900
110	09/20/93:12:45:00	75.65200	73.33700	75.58500	75.90100	78.68300	78.59900
111	09/20/93:13:00:00	75.71300	73.83800	75.53800	76.31000	78.66100	78.57900
112	09/20/93:13:15:00	75.80700	73.77000	75.60500	76.49100	78.64500	78.56100
113	09/20/93:13:30:00	75.83300	73.67500	75.72600	76.67800	78.62200	78.53800
114	09/20/93:13:45:00	75.98100	73.79700	75.76600	76.23600	78.61100	78.52900
115	09/20/93:14:00:00	75.98800	74.08100	75.87400	76.57100	78.59000	78.50700
116	09/20/93:14:15:00	76.08900	73.97300	75.89400	76.53100	78.57900	78.49500
117	09/20/93:14:30:00	76.19600	74.25700	76.02800	76.93900	78.56800	78.48600
118	09/20/93:14:45:00	76.23600	74.08800	76.02100	77.14600	78.55900	78.47500
119	09/20/93:15:00:00	76.35700	74.18900	76.17600	77.26600	78.53600	78.46400
120	09/20/93:15:15:00	76.35700	74.31800	76.19600	77.78600	78.53600	78.45200

TABLE C
DEW POINT TEMPERATURE SENSOR READINGS
(DEG F)

DATA		SENSOR NUMBER					
SET	REAL TIME	1	2	3	4	5	6
121	09/20/93:15:30:00	76.41700	74.62800	76.27000	77.17300	78.51300	78.43200
122	09/20/93:15:45:00	76.63100	74.43900	76.31700	76.89900	78.52000	78.42700
123	09/20/93:16:00:00	76.61100	74.55400	76.45700	77.00600	78.49300	78.40900
124	09/20/93:16:15:00	76.70500	74.52000	76.57100	77.24600	78.49300	78.39800
125	09/20/93:16:30:00	76.71800	74.75700	76.48400	77.55300	78.45900	78.37800
126	09/20/93:16:45:00	76.79900	74.57400	76.67800	77.54600	78.45000	78.36600
127	09/20/93:17:00:00	76.95900	74.55400	76.65100	77.17300	78.43900	78.34400
128	09/20/93:17:15:00	76.95200	75.06700	76.81200	77.87900	78.42700	78.33200
129	09/20/93:17:30:00	77.01200	74.66900	76.85900	77.48600	78.41600	78.32300
130	09/20/93:17:45:00	77.10600	75.24200	76.93900	78.25100	78.40700	78.32300
131	09/20/93:18:00:00	77.12600	74.94500	76.97900	77.79900	78.39600	78.30100
132	09/20/93:18:15:00	77.16600	75.08700	76.99900	77.90600	78.39600	78.28900
133	09/20/93:18:30:00	77.22600	75.24800	77.07900	77.91900	78.37300	78.28000
134	09/20/93:18:45:00	77.27300	75.48400	77.17900	78.47700	78.38000	78.27600
135	09/20/93:19:00:00	77.33300	75.14100	77.28600	78.44300	78.36200	78.25800
136	09/20/93:19:15:00	77.45300	75.24200	77.31300	78.26400	78.35300	78.25800
137	09/20/93:19:30:00	77.51300	75.61200	77.36600	78.54900	78.34100	78.24600
138	09/20/93:19:45:00	77.52600	75.39700	77.42600	77.84600	78.34100	78.24600
139	09/20/93:20:00:00	77.56600	75.51800	77.48600	78.20500	78.33000	78.23500
140	09/20/93:20:15:00	77.67900	75.91400	77.58600	78.27800	78.32500	78.23000
141	09/20/93:20:30:00	77.76600	75.73900	77.67300	78.05800	78.31900	78.21500
142	09/20/93:20:45:00	77.79200	76.02800	77.73900	78.00500	78.31400	78.21000
143	09/20/93:21:00:00	77.85200	75.72600	77.63300	78.36400	78.30500	78.19900
144	09/20/93:21:15:00	77.89200	75.94800	77.77300	78.67500	78.29800	78.19200
145	09/20/93:21:30:00	77.92500	76.02800	77.77900	78.68900	78.27600	78.18100

TABLE D
PRESSURE SENSOR READINGS

DATA		SENSOR NUMBER		
SET	REAL TIME	1	2	3
1	09/19/93:17:57:00	14.39600	14.38700	0.00000
2	09/19/93:18:12:00	14.86200	14.85700	0.00000
3	09/19/93:18:27:00	15.47400	15.46700	0.00000
4	09/19/93:18:42:00	16.10900	16.10300	0.00000
5	09/19/93:18:57:00	16.78500	16.78000	0.00000
6	09/19/93:19:12:00	17.57300	17.56300	0.00000
7	09/19/93:19:27:00	18.35800	18.34800	0.00000
8	09/19/93:19:42:00	19.66700	19.65400	0.00000
9	09/19/93:19:57:00	21.14300	21.13500	0.00000
10	09/19/93:20:12:00	22.61900	22.60700	0.00000
11	09/19/93:20:27:00	24.09600	24.08200	0.00000
12	09/19/93:20:42:00	25.56800	25.56600	0.00000
13	09/19/93:20:57:00	27.04500	27.03800	0.00000
14	09/19/93:21:12:00	28.51700	28.50400	0.00000
15	09/19/93:21:27:00	29.98800	29.97900	0.00000
16	09/19/93:21:42:00	31.45800	31.45300	0.00000
17	09/19/93:21:57:00	32.93800	32.92700	0.00000
18	09/19/93:22:12:00	34.41700	34.40600	0.00000
19	09/19/93:22:27:00	35.89100	35.88200	0.00000
20	09/19/93:22:42:00	37.37700	37.36800	0.00000
21	09/19/93:22:57:00	38.84800	38.83600	0.00000
22	09/19/93:23:12:00	40.33100	40.31900	0.00000
23	09/19/93:23:27:00	41.84700	41.84100	0.00000
24	09/19/93:23:42:00	43.47800	43.46300	0.00000
25	09/19/93:23:57:00	45.09300	45.07400	0.00000
26	09/20/93:00:12:00	46.70700	46.69500	0.00000
27	09/20/93:00:27:00	48.30200	48.29000	0.00000
28	09/20/93:00:42:00	49.88000	49.87000	0.00000
29	09/20/93:00:57:00	51.45400	51.44500	0.00000
30	09/20/93:01:12:00	53.03600	53.02500	0.00000
31	09/20/93:01:27:00	54.72000	54.57500	0.00000
32	09/20/93:01:42:00	56.12700	56.11500	0.00000
33	09/20/93:01:57:00	56.99400	56.98000	0.00000
34	09/20/93:02:12:00	57.84800	57.83500	0.00000
35	09/20/93:02:27:00	58.35600	58.34200	0.00000
36	09/20/93:02:42:00	58.77200	58.75900	0.00000
37	09/20/93:02:50:35	59.01700	59.01400	0.00000
38	09/20/93:03:00:00	58.98300	58.96900	0.00000
39	09/20/93:03:05:00	58.97400	58.96000	0.00000
40	09/20/93:03:10:00	58.96700	58.95300	0.00000

TABLE D

PRESSURE SENSOR READINGS

DATA		SENSOR NUMBER		
SET	REAL TIME	1	2	3
41	09/20/93:03:15:00	58.96100	58.94700	0.00000
42	09/20/93:03:20:00	58.95700	58.94200	0.00000
43	09/20/93:03:25:00	58.95300	58.93800	0.00000
44	09/20/93:03:30:00	58.94900	58.93500	0.00000
45	09/20/93:03:35:00	58.94600	58.93200	0.00000
46	09/20/93:03:40:00	58.94300	58.92900	0.00000
47	09/20/93:03:45:00	58.94000	58.92600	0.00000
48	09/20/93:03:50:00	58.93700	58.92300	0.00000
49	09/20/93:03:55:00	58.93500	58.92100	0.00000
50	09/20/93:04:00:00	58.93300	58.91800	0.00000
51	09/20/93:04:05:00	58.93100	58.91700	0.00000
52	09/20/93:04:10:00	58.92900	58.91400	0.00000
53	09/20/93:04:15:00	58.92700	58.91200	0.00000
54	09/20/93:04:20:00	58.92500	58.91000	0.00000
55	09/20/93:04:25:00	58.92300	58.90800	0.00000
56	09/20/93:04:30:00	58.92100	58.90600	0.00000
57	09/20/93:04:35:00	58.91900	58.90400	0.00000
58	09/20/93:04:40:00	58.91700	58.90300	0.00000
59	09/20/93:04:45:00	58.91500	58.90100	0.00000
60	09/20/93:04:50:00	58.91400	58.89900	0.00000
61	09/20/93:04:55:00	58.91300	58.89900	0.00000
62	09/20/93:05:00:00	58.91200	58.89800	0.00000
63	09/20/93:05:05:00	58.91200	58.89700	0.00000
64	09/20/93:05:10:00	58.91100	58.89700	0.00000
65	09/20/93:05:15:00	58.91100	58.89800	0.00000
66	09/20/93:05:20:00	58.91100	58.89700	0.00000
67	09/20/93:05:25:00	58.91100	58.89700	0.00000
68	09/20/93:05:30:00	58.91100	58.89600	0.00000
69	09/20/93:05:35:00	58.91100	58.89600	0.00000
70	09/20/93:05:40:00	58.91000	58.89600	0.00000
71	09/20/93:05:45:00	58.91000	58.89600	0.00000
72	09/20/93:05:50:00	58.91000	58.89600	0.00000
73	09/20/93:05:55:00	58.91000	58.89600	0.00000
74	09/20/93:06:00:00	58.91000	58.89600	0.00000
75	09/20/93:06:05:00	58.91000	58.89600	0.00000
76	09/20/93:06:10:00	58.91000	58.89500	0.00000
77	09/20/93:06:15:00	58.90900	58.89500	0.00000
78	09/20/93:06:20:00	58.90900	58.89500	0.00000
79	09/20/93:06:25:00	58.90900	58.89500	0.00000
80	09/20/93:06:30:00	58.90900	58.89500	0.00000

TABLE D
PRESSURE SENSOR READINGS

DATA		SENSOR NUMBER		
SET	REAL TIME	1	2	3
81	09/20/93:06:35:00	58.90900	58.89500	0.00000
82	09/20/93:06:40:00	58.90900	58.89500	0.00000
83	09/20/93:06:45:00	58.91000	58.89500	0.00000
84	09/20/93:06:50:00	58.91000	58.89600	0.00000
85	09/20/93:06:55:00	58.91000	58.89600	0.00000
86	09/20/93:07:00:00	58.91000	58.89600	0.00000
87	09/20/93:07:05:00	58.91000	58.89600	0.00000
88	09/20/93:07:15:00	58.91100	58.89600	0.00000
89	09/20/93:07:30:00	58.91100	58.89700	0.00000
90	09/20/93:07:45:00	58.91200	58.89800	0.00000
91	09/20/93:08:00:00	58.91300	58.89900	0.00000
92	09/20/93:08:15:00	58.91400	58.90000	0.00000
93	09/20/93:08:30:00	58.91600	58.90100	0.00000
94	09/20/93:08:45:00	58.91700	58.90300	0.00000
95	09/20/93:09:00:00	58.91800	58.90400	0.00000
96	09/20/93:09:15:00	58.92000	58.90600	0.00000
97	09/20/93:09:30:00	58.92100	58.90700	0.00000
98	09/20/93:09:45:00	58.92300	58.90900	0.00000
99	09/20/93:10:00:00	58.92400	58.91000	0.00000
100	09/20/93:10:15:00	58.92600	58.91200	0.00000
101	09/20/93:10:30:00	58.92700	58.91300	0.00000
102	09/20/93:10:45:00	58.92900	58.91500	0.00000
103	09/20/93:11:00:00	58.93100	58.91700	0.00000
104	09/20/93:11:15:00	58.93300	58.91900	0.00000
105	09/20/93:11:30:00	58.93500	58.92100	0.00000
106	09/20/93:11:45:00	58.93700	58.92200	0.00000
107	09/20/93:12:00:00	58.93800	58.92400	0.00000
108	09/20/93:12:15:00	58.94000	58.92600	0.00000
109	09/20/93:12:30:00	58.94200	58.92800	0.00000
110	09/20/93:12:45:00	58.94400	58.93000	0.00000
111	09/20/93:13:00:00	58.94600	58.93200	0.00000
112	09/20/93:13:15:00	58.94800	58.93400	0.00000
113	09/20/93:13:30:00	58.95000	58.93600	0.00000
114	09/20/93:13:45:00	58.95200	58.93800	0.00000
115	09/20/93:14:00:00	58.95400	58.94000	0.00000
116	09/20/93:14:15:00	58.95700	58.94200	0.00000
117	09/20/93:14:30:00	58.95900	58.94500	0.00000
118	09/20/93:14:45:00	58.96100	58.94700	0.00000
119	09/20/93:15:00:00	58.96300	58.94900	0.00000
120	09/20/93:15:15:00	58.96500	58.95100	0.00000

TABLE D
PRESSURE SENSOR READINGS

DATA		SENSOR NUMBER		
SET	REAL TIME	1	2	3
121	09/20/93:15:30:00	58.96700	58.95300	0.00000
122	09/20/93:15:45:00	58.96900	58.95500	0.00000
123	09/20/93:16:00:00	58.97200	58.95800	0.00000
124	09/20/93:16:15:00	58.97100	58.95700	0.00000
125	09/20/93:16:30:00	58.96100	58.94600	0.00000
126	09/20/93:16:45:00	58.95000	58.93600	0.00000
127	09/20/93:17:00:00	58.94000	58.92600	0.00000
128	09/20/93:17:15:00	58.93100	58.91700	0.00000
129	09/20/93:17:30:00	58.92100	58.90700	0.00000
130	09/20/93:17:45:00	58.91100	58.89600	0.00000
131	09/20/93:18:00:00	58.90100	58.88700	0.00000
132	09/20/93:18:15:00	58.89100	58.87700	0.00000
133	09/20/93:18:30:00	58.88100	58.86700	0.00000
134	09/20/93:18:45:00	58.87200	58.85800	0.00000
135	09/20/93:19:00:00	58.86200	58.84800	0.00000
136	09/20/93:19:15:00	58.85100	58.83700	0.00000
137	09/20/93:19:30:00	58.84200	58.82800	0.00000
138	09/20/93:19:45:00	58.83200	58.81800	0.00000
139	09/20/93:20:00:00	58.82200	58.80800	0.00000
140	09/20/93:20:15:00	58.81300	58.80500	0.00000
141	09/20/93:20:30:00	58.80300	58.78900	0.00000
142	09/20/93:20:45:00	58.79300	58.77900	0.00000
143	09/20/93:21:00:00	58.78300	58.76900	0.00000
144	09/20/93:21:15:00	58.77300	58.75900	0.00000
145	09/20/93:21:30:00	58.76300	58.74900	0.00000

TABLE 4

CONTAINMENT TEMPERATURE STABILITY PARAMETERS

DATA SET	TIME	ELAPSED (HRS)	TEMPERATURE		MASS POINT		TOTAL TIME	
	REAL		AVG (F)	Tstab (F/HR)	Lam (%/DAY)	UCL (%/DAY)	Lam (%/DAY)	UCL (%/DAY)
S1	09/20/93:03:00:00	0.00	84.810	-0.790	0.0000	0.0000	0.0000	0.0000
S2	09/20/93:03:05:00	0.08	84.691	-0.867	-2.1742	0.0000	-2.1742	0.0000
S3	09/20/93:03:10:00	0.17	84.610	-0.875	-1.7312	0.0000	-1.7393	0.0000
S4	09/20/93:03:15:00	0.25	84.546	-0.908	-1.5026	-0.9966	-1.5220	-0.7855
S5	09/20/93:03:20:00	0.33	84.491	-0.877	-1.2790	-0.8878	-1.2927	-0.9184
S6	09/20/93:03:25:00	0.42	84.448	-0.834	-1.1891	-0.9348	-1.2574	-0.6489
S7	09/20/93:03:30:00	0.50	84.399	-0.722	-1.0345	-0.7862	-1.0533	-0.5914
S8	09/20/93:03:35:00	0.58	84.370	-0.682	-0.9480	-0.7437	-1.0127	-0.4965
S9	09/20/93:03:40:00	0.67	84.341	-0.642	-0.8397	-0.6463	-0.8795	-0.3927
S10	09/20/93:03:45:00	0.75	84.309	-0.557	-0.7476	-0.5665	-0.7980	-0.3128
S11	09/20/93:03:50:00	0.83	84.274	-0.529	-0.7277	-0.5802	-0.8606	-0.2280
S12	09/20/93:03:55:00	0.92	84.247	-0.545	-0.6773	-0.5453	-0.7565	-0.1543
S13	09/20/93:04:00:00	1.00	84.229	-0.325	-0.6376	-0.5197	-0.7263	-0.1049
S14	09/20/93:04:05:00	1.08	84.206	-0.228	-0.5920	-0.4811	-0.6634	-0.0597
S15	09/20/93:04:10:00	1.17	84.189	-0.166	-0.5600	-0.4592	-0.6521	-0.0064
S16	09/20/93:04:15:00	1.25	84.165	-0.074	-0.5097	-0.4082	-0.5584	0.0327
S17	09/20/93:04:20:00	1.33	84.138	-0.045	-0.4970	-0.4069	-0.6250	0.0668
S18	09/20/93:04:25:00	1.42	84.122	-0.021	-0.4636	-0.3772	-0.5359	0.1083
S19	09/20/93:04:30:00	1.50	84.110	0.061	-0.4348	-0.3525	-0.5139	0.1368
S20	09/20/93:04:35:00	1.58	84.099	0.075	-0.3956	-0.3119	-0.4425	0.1670
S21	09/20/93:04:40:00	1.67	84.083	0.084	-0.3636	-0.2817	-0.4294	0.2037
S22	09/20/93:04:45:00	1.75	84.066	0.144	-0.3366	-0.2576	-0.4138	0.2295
S23	09/20/93:04:50:00	1.83	84.048	0.158	-0.3252	-0.2523	-0.4488	0.2521
S24	09/20/93:04:55:00	1.92	84.037	0.169	-0.3066	-0.2376	-0.4009	0.2812
S25	09/20/93:05:00:00	2.00	84.019	0.213	-0.2980	-0.2340	-0.4232	0.2995
S26	09/20/93:05:05:00	2.08	84.008	0.219	-0.2841	-0.2235	-0.3846	0.3173
S27	09/20/93:05:10:00	2.17	84.001	0.223	-0.2755	-0.2189	-0.3930	0.3395
S28	09/20/93:05:15:00	2.25	83.999	0.292	-0.2682	-0.2152	-0.3860	0.3533
S29	09/20/93:05:20:00	2.33	83.988	0.302	-0.2689	-0.2197	-0.4168	0.3649
S30	09/20/93:05:25:00	2.42	83.989	0.309	-0.2652	-0.2192	-0.3882	0.3812
S31	09/20/93:05:30:00	2.50	83.988	0.360	-0.2549	-0.2107	-0.3441	0.3917
S32	09/20/93:05:35:00	2.58	83.983	0.358	-0.2513	-0.2097	-0.3688	0.4005
S33	09/20/93:05:40:00	2.67	83.983	0.364	-0.2422	-0.2022	-0.3296	0.4146
S34	09/20/93:05:45:00	2.75	83.982	0.421	-0.2316	-0.1926	-0.3091	0.4234
S35	09/20/93:05:50:00	2.83	83.980	0.428	-0.2239	-0.1864	-0.3139	0.4313
S36	09/20/93:05:55:00	2.92	83.982	0.429	-0.2150	-0.1786	-0.2960	0.4436
S37	09/20/93:06:00:00	3.00	83.974	0.377	-0.2069	-0.1716	-0.2902	0.4507
S38	09/20/93:06:05:00	3.08	83.972	0.379	-0.2019	-0.1682	-0.3007	0.4569
S39	09/20/93:06:10:00	3.17	83.976	0.380	-0.1958	-0.1632	-0.2848	0.4670
S40	09/20/93:06:15:00	3.25	83.977	0.368	-0.1870	-0.1550	-0.2585	0.4733
S41	09/20/93:06:20:00	3.33	83.966	0.363	-0.1821	-0.1512	-0.2748	0.4786

Temperature Stabilization Criteria = .5 °F/HR

TABLE 4

CONTAINMENT TEMPERATURE STABILITY PARAMETERS

DATA SET	TIME	ELAPSED (HRS)	TEMPERATURE		MASS POINT		TOTAL TIME	
	REAL		AVG (F)	Tstab (F/HR)	Lam (%/DAY)	UCL (%/DAY)	Lam (%/DAY)	UCL (%/DAY)
S42	09/20/93:06:25:00	3.42	83.964	0.352	-0.1759	-0.1459	-0.2590	0.4876
S43	09/20/93:06:30:00	3.50	83.962	0.303	-0.1697	-0.1405	-0.2506	0.4926
S44	09/20/93:06:35:00	3.58	83.972	0.309	-0.1621	-0.1333	-0.2315	0.4979
S45	09/20/93:06:40:00	3.67	83.962	0.295	-0.1572	-0.1292	-0.2435	0.5057
S46	09/20/93:06:45:00	3.75	83.966	0.266	-0.1535	-0.1266	-0.2468	0.5094
S47	09/20/93:06:50:00	3.83	83.964	0.260	-0.1498	-0.1238	-0.2406	0.5131
S48	09/20/93:06:55:00	3.92	83.968	0.254	-0.1474	-0.1223	-0.2454	0.5193
S49	09/20/93:07:00:00	4.00	83.967	0.204	-0.1433	-0.1190	-0.2277	0.5225
S50	09/20/93:07:05:00	4.08	83.959	0.170	-0.1422	-0.1189	-0.2474	0.5248
S51	09/20/93:07:15:00	4.25	83.963	0.132	-0.1391	-0.1165	-0.2249	0.5529
S52	09/20/93:07:30:00	4.50	83.974	0.094	-0.1331	-0.1109	-0.1967	0.6003

Temperature Stabilization Criteria = .5 °F/HR

TABLE 4A

CONTAINMENT MASS POINT LEAKAGE STABILITY

DATA SET	TIME	ELAPSED (HRS)	TOTAL Lam (%/DAY)	UCL (%/DAY)	.25*La (%/DAY)	L2H (%/DAY)	SLIDING	
	REAL						L1H (%/DAY)	L2H-L1H (%/DAY)
S1	09/20/93:03:00:00	0.00	0.0000	0.0000	0.5000	0.0000	0.0000	0.0000
S2	09/20/93:03:05:00	0.08	-2.1742	0.0000	0.5000	0.0000	0.0000	0.0000
S3	09/20/93:03:10:00	0.17	-1.7312	0.0000	0.5000	0.0000	0.0000	0.0000
S4	09/20/93:03:15:00	0.25	-1.5026	-0.9966	0.5000	0.0000	0.0000	0.0000
S5	09/20/93:03:20:00	0.33	-1.2790	-0.8878	0.5000	0.0000	0.0000	0.0000
S6	09/20/93:03:25:00	0.42	-1.1891	-0.9348	0.5000	0.0000	0.0000	0.0000
S7	09/20/93:03:30:00	0.50	-1.0345	-0.7862	0.5000	0.0000	0.0000	0.0000
S8	09/20/93:03:35:00	0.58	-0.9480	-0.7437	0.5000	0.0000	0.0000	0.0000
S9	09/20/93:03:40:00	0.67	-0.8397	-0.6463	0.5000	0.0000	0.0000	0.0000
S10	09/20/93:03:45:00	0.75	-0.7476	-0.5665	0.5000	0.0000	0.0000	0.0000
S11	09/20/93:03:50:00	0.83	-0.7277	-0.5802	0.5000	0.0000	0.0000	0.0000
S12	09/20/93:03:55:00	0.92	-0.6773	-0.5453	0.5000	0.0000	0.0000	0.0000
S13	09/20/93:04:00:00	1.00	-0.6376	-0.5197	0.5000	0.0000	0.0000	0.0000
S14	09/20/93:04:05:00	1.08	-0.5920	-0.4811	0.5000	0.0000	0.0000	0.0000
S15	09/20/93:04:10:00	1.17	-0.5600	-0.4592	0.5000	0.0000	0.0000	0.0000
S16	09/20/93:04:15:00	1.25	-0.5097	-0.4082	0.5000	0.0000	0.0000	0.0000
S17	09/20/93:04:20:00	1.33	-0.4970	-0.4069	0.5000	0.0000	0.0000	0.0000
S18	09/20/93:04:25:00	1.42	-0.4636	-0.3772	0.5000	0.0000	0.0000	0.0000
S19	09/20/93:04:30:00	1.50	-0.4348	-0.3525	0.5000	0.0000	0.0000	0.0000
S20	09/20/93:04:35:00	1.58	-0.3956	-0.3119	0.5000	0.0000	0.0000	0.0000
S21	09/20/93:04:40:00	1.67	-0.3636	-0.2817	0.5000	0.0000	0.0000	0.0000
S22	09/20/93:04:45:00	1.75	-0.3366	-0.2576	0.5000	0.0000	0.0000	0.0000
S23	09/20/93:04:50:00	1.83	-0.3252	-0.2523	0.5000	0.0000	0.0000	0.0000
S24	09/20/93:04:55:00	1.92	-0.3066	-0.2376	0.5000	0.0000	0.0000	0.0000
S25	09/20/93:05:00:00	2.00	-0.2980	-0.2340	0.5000	0.0000	0.0000	0.0000
S26	09/20/93:05:05:00	2.08	-0.2841	-0.2235	0.5000	-0.2450	-0.0689	0.1761
S27	09/20/93:05:10:00	2.17	-0.2755	-0.2189	0.5000	-0.2110	-0.0831	0.1280
S28	09/20/93:05:15:00	2.25	-0.2682	-0.2152	0.5000	-0.1873	-0.1156	0.0717
S29	09/20/93:05:20:00	2.33	-0.2689	-0.2197	0.5000	-0.1798	-0.1519	0.0279
S30	09/20/93:05:25:00	2.42	-0.2652	-0.2192	0.5000	-0.1688	-0.2198	0.0510
S31	09/20/93:05:30:00	2.50	-0.2549	-0.2107	0.5000	-0.1565	-0.2158	0.0593
S32	09/20/93:05:35:00	2.58	-0.2513	-0.2097	0.5000	-0.1512	-0.2467	0.0955
S33	09/20/93:05:40:00	2.67	-0.2422	-0.2022	0.5000	-0.1412	-0.2038	0.0626
S34	09/20/93:05:45:00	2.75	-0.2316	-0.1926	0.5000	-0.1254	-0.1454	0.0200
S35	09/20/93:05:50:00	2.83	-0.2239	-0.1864	0.5000	-0.1127	-0.0971	0.0155
S36	09/20/93:05:55:00	2.92	-0.2150	-0.1786	0.5000	-0.1084	-0.0730	0.0354
S37	09/20/93:06:00:00	3.00	-0.2069	-0.1716	0.5000	-0.1013	-0.0249	0.0763
S38	09/20/93:06:05:00	3.08	-0.2019	-0.1682	0.5000	-0.1024	-0.0275	0.0748
S39	09/20/93:06:10:00	3.17	-0.1958	-0.1632	0.5000	-0.0978	0.0061	0.1039
S40	09/20/93:06:15:00	3.25	-0.1870	-0.1550	0.5000	-0.0901	0.0465	0.1366
S41	09/20/93:06:20:00	3.33	-0.1821	-0.1512	0.5000	-0.0823	0.0494	0.1317

Leakage Stabilization Criteria = $|L2H-L1H| \leq .25La$

TABLE 4A

CONTAINMENT MASS POINT LEAKAGE STABILITY

DATA SET	TIME	ELAPSED (HRS)	Lam (%/DAY)	TOTAL			SLIDING		
	REAL			UCL (%/DAY)	.25*La (%/DAY)	L2H (%/DAY)	L1H (%/DAY)	L2H-L1H (%/DAY)	
S42	09/20/93:06:25:00	3.42	-0.1759	-0.1459	0.5000	-0.0852	0.0194	0.1046	
S43	09/20/93:06:30:00	3.50	-0.1697	-0.1405	0.5000	-0.0782	0.0022	0.0803	
S44	09/20/93:06:35:00	3.58	-0.1621	-0.1333	0.5000	-0.0660	0.0361	0.1021	
S45	09/20/93:06:40:00	3.67	-0.1572	-0.1292	0.5000	-0.0518	**.*	0.0518	
S46	09/20/93:06:45:00	3.75	-0.1535	-0.1266	0.5000	-0.0415	-0.0191	0.0224	
S47	09/20/93:06:50:00	3.83	-0.1498	-0.1238	0.5000	-0.0297	-0.0197	0.0100	
S48	09/20/93:06:55:00	3.92	-0.1474	-0.1223	0.5000	-0.0322	-0.0496	0.0174	
S49	09/20/93:07:00:00	4.00	-0.1433	-0.1190	0.5000	-0.0215	-0.0431	0.0216	
S50	09/20/93:07:05:00	4.08	-0.1422	-0.1189	0.5000	-0.0297	-0.0752	0.0455	
S51	09/20/93:07:15:00	4.25	-0.1391	-0.1165	0.5000	-0.0217	-0.1209	0.0992	
S52	09/20/93:07:30:00	4.50	-0.1331	-0.1109	0.5000	-0.0325	-0.0683	0.0358	

Leakage Stabilization Criteria = $|L2H-L1H| \leq .25La$

TABLE 2

TYPE A TEST LEAKAGE AND ERROR PARAMETERS

DATA SET	TIME		MASS POINT		TOTAL TIME		
	REAL	ELAPSED (HRS)	Lam (%/DAY)	UCL (%/DAY)	Lam (%/DAY)	LS FIT (%/DAY)	UCL (%/DAY)
A1	09/20/93:07:45:00	0.00	0.00000	0.00000	0.00000	0.00000	0.00000
A2	09/20/93:08:00:00	0.25	0.32110	0.00000	0.32110	0.00000	0.00000
A3	09/20/93:08:15:00	0.50	0.17949	0.00000	0.17949	0.17949	0.00000
A4	09/20/93:08:30:00	0.75	0.11047	0.26958	0.11853	0.10509	0.42406
A5	09/20/93:08:45:00	1.00	0.09926	0.17434	0.11976	0.08497	0.33901
A6	09/20/93:09:00:00	1.25	0.07896	0.13000	0.09173	0.06243	0.25316
A7	09/20/93:09:15:00	1.50	0.06426	0.10242	0.07801	0.04590	0.20948
A8	09/20/93:09:30:00	1.75	0.06671	0.09428	0.09075	0.04411	0.20421
A9	09/20/93:09:45:00	2.00	0.04109	0.07600	0.03756	0.02220	0.16159
A10	09/20/93:10:00:00	2.25	0.03786	0.06541	0.05793	0.01660	0.15145
A11	09/20/93:10:15:00	2.50	0.03547	0.05779	0.05456	0.01252	0.14373
A12	09/20/93:10:30:00	2.75	0.04955	0.07310	0.08936	0.02145	0.16109
A13	09/20/93:10:45:00	3.00	0.05725	0.07852	0.08399	0.02704	0.16735
A14	09/20/93:11:00:00	3.25	0.05339	0.07190	0.05851	0.02471	0.15920
A15	09/20/93:11:15:00	3.50	0.05682	0.07313	0.07511	0.02758	0.16001
A16	09/20/93:11:30:00	3.75	0.05801	0.07224	0.07054	0.02904	0.15842
A17	09/20/93:11:45:00	4.00	0.05305	0.06652	0.05138	0.02611	0.15055
A18	09/20/93:12:00:00	4.25	0.06000	0.07382	0.08642	0.03153	0.15622
A19	09/20/93:12:15:00	4.50	0.06236	0.07490	0.07576	0.03398	0.15659
A20	09/20/93:12:30:00	4.75	0.06177	0.07303	0.06653	0.03438	0.15397
A21	09/20/93:12:45:00	5.00	0.06308	0.07333	0.07306	0.03607	0.15346
A22	09/20/93:13:00:00	5.25	0.06631	0.07613	0.08156	0.03913	0.15515
A23	09/20/93:13:15:00	5.50	0.06846	0.07766	0.07962	0.04150	0.15582
A24	09/20/93:13:30:00	5.75	0.06866	0.07708	0.07278	0.04251	0.15458
A25	09/20/93:13:45:00	6.00	0.06944	0.07720	0.07542	0.04388	0.15399
A26	09/20/93:14:00:00	6.25	0.07123	0.07860	0.08072	0.04594	0.15450
A27	09/20/93:14:15:00	6.50	0.07072	0.07755	0.07099	0.04638	0.15284
A28	09/20/93:14:30:00	6.75	0.07263	0.07924	0.08258	0.04846	0.15356
A29	09/20/93:14:45:00	7.00	0.07321	0.07938	0.07728	0.04961	0.15306
A30	09/20/93:15:00:00	7.25	0.07406	0.07987	0.07911	0.05092	0.15285
A31	09/20/93:15:15:00	7.50	0.07627	0.08211	0.08732	0.05317	0.15403
A32	09/20/93:15:30:00	7.75	0.07698	0.08249	0.08064	0.05438	0.15381
A33	09/20/93:15:45:00	8.00	0.07761	0.08282	0.08080	0.05552	0.15356

TABLE 3

VERIFICATION TEST PARAMETERS

DATA SET	REAL TIME	Lo (%/DAY)	MASS POINT			TOTAL TIME		
			LIMIT <	Lc	< LIMIT	LIMIT <	Lc	< LIMIT
			(%/DAY)	(%/DAY)	(%/DAY)	(%/DAY)	(%/DAY)	(%/DAY)
V1	09/20/93:16:30:00	1.97640	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
V2	09/20/93:16:45:00	1.97640	0.00000	2.18821	0.00000	0.00000	2.18822	0.00000
V3	09/20/93:17:00:00	1.97640	0.00000	1.98298	0.00000	0.00000	1.98297	0.00000
V4	09/20/93:17:15:00	1.97640	1.55401	2.05387	2.55401	1.55720	2.08454	2.55720
V5	09/20/93:17:30:00	1.97640	1.55401	2.01863	2.55401	1.55720	2.01509	2.55720
V6	09/20/93:17:45:00	1.97640	1.55401	2.07671	2.55401	1.55720	2.11123	2.55720
V7	09/20/93:18:00:00	1.97640	1.55401	2.05778	2.55401	1.55720	2.04375	2.55720
V8	09/20/93:18:15:00	1.97640	1.55401	2.05288	2.55401	1.55720	2.05088	2.55720
V9	09/20/93:18:30:00	1.97640	1.55401	2.05311	2.55401	1.55720	2.05583	2.55720
V10	09/20/93:18:45:00	1.97640	1.55401	2.06287	2.55401	1.55720	2.07519	2.55720
V11	09/20/93:19:00:00	1.97640	1.55401	2.05795	2.55401	1.55720	2.05141	2.55720
V12	09/20/93:19:15:00	1.97640	1.55401	2.05911	2.55401	1.55720	2.06147	2.55720
V13	09/20/93:19:30:00	1.97640	1.55401	2.06112	2.55401	1.55720	2.06458	2.55720
V14	09/20/93:19:45:00	1.97640	1.55401	2.05293	2.55401	1.55720	2.03884	2.55720
V15	09/20/93:20:00:00	1.97640	1.55401	2.04938	2.55401	1.55720	2.04491	2.55720
V16	09/20/93:20:15:00	1.97640	1.55401	2.05188	2.55401	1.55720	2.05998	2.55720
V17	09/20/93:20:30:00	1.97640	1.55401	2.04671	2.55401	1.55720	2.03746	2.55720
V18	09/20/93:20:45:00	1.97640	1.55401	2.04795	2.55401	1.55720	2.05439	2.55720
V19	09/20/93:21:00:00	1.97640	1.55401	2.04488	2.55401	1.55720	2.04005	2.55720
V20	09/20/93:21:15:00	1.97640	1.55401	2.04484	2.55401	1.55720	2.04844	2.55720
V21	09/20/93:21:30:00	1.97640	1.55401	2.04588	2.55401	1.55720	2.05236	2.55720

ILRT INSTRUMENTATION LIST

III. ILRT Sensor Locations

EQUIP ID	RTD	DW/T	AZIMUTH	DISTANCE FROM CENTER	ELEV.	ZONE	FRACTIONS
TE4328A	T1	T	270	55	735	T	0.1122
TE4328B	T2	T	0	55	735	T	0.1123
TE4328C	T3	T	90	55	735	T	0.1122
TE4328D	T4	T	180	55	735	T	0.1123
TE4328E	T5	DW	45	20	749	VII	0.055
TE4328F	T6	DW	225	20	750	VII	0.055
TE4328G	T7	DW	90	23	764	VI	0.065
TE4328H	T8	DW	330	23	766	VI	0.066
TE4328J	T9	DW	0	18	784	V	0.055
TE4328K	T10	DW	180	18	784	V	0.055
TE4328L	T11	DW	20	15	828	I&II	0.040
TE4328M	T12	DW	30	5	750	VIII	0.027
TE4328N	T13+	DW	210	23	766	VI	0.066
TE4328P	T14+	DW	270	15	802	IV	0.030
TE4328Q	T15+	DW	180	15	817	III	0.037

TOTAL

1.000

Dewpoint

ME4326A	M1+	DW	0	20	780	V	0.110
ME4326B	M2+	DW	90	23	765	VI	0.197
ME4326C	M3+	DW	225	20	750	VII, VIII	0.136
ME4326D	M4+	DW	180	15	817	I, II, III	0.108
ME4326E	M5+	T	270	55	735	T	0.2245
ME4326F	M6+	T	90	55	735	T	0.2245

TOTAL

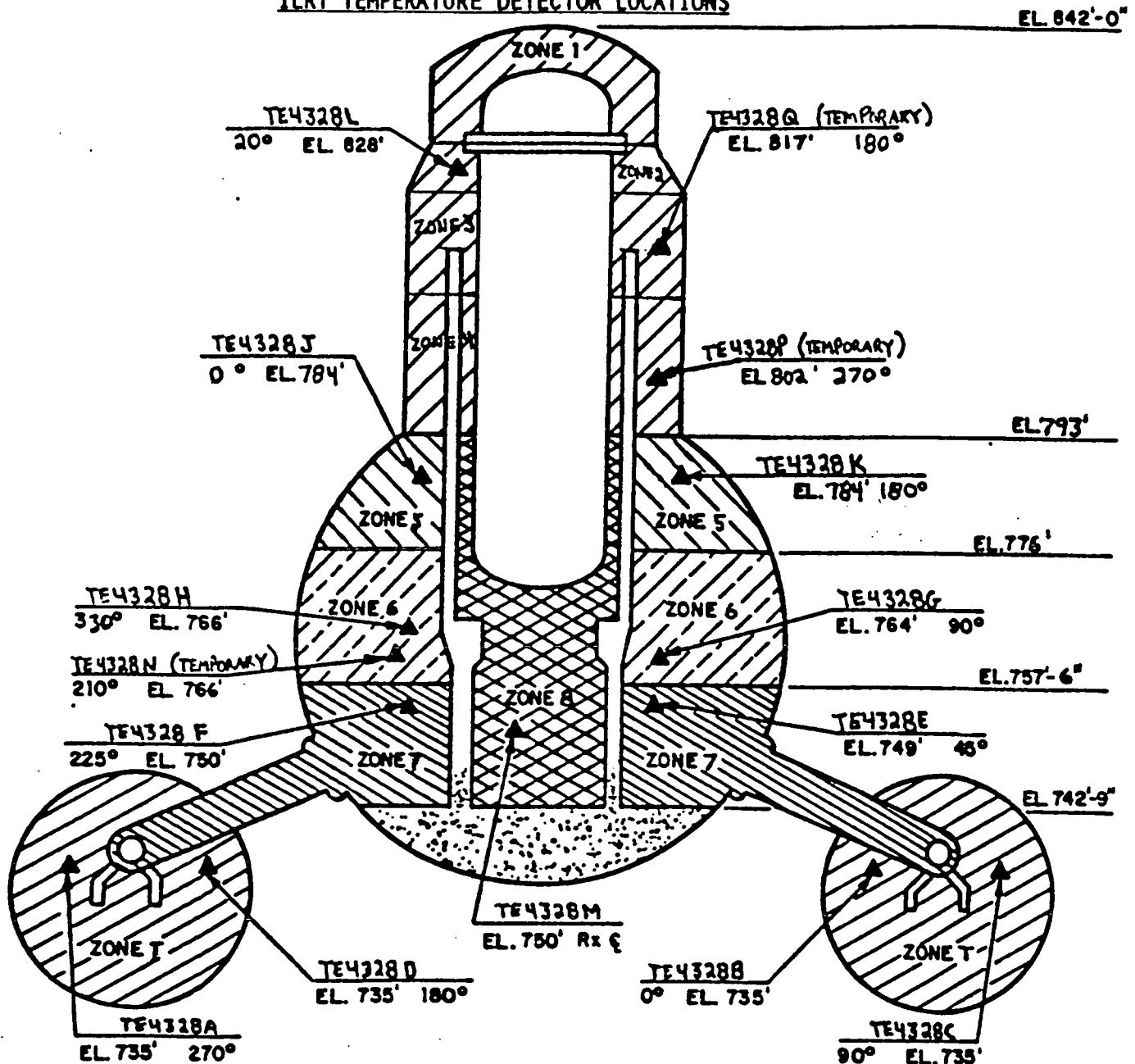
1.000

+ Temporary RTD and/or dewpoint sensors.

Vent header is included in torus volume when determining volume fractions.

ILRT INSTRUMENTATION

ILRT TEMPERATURE DETECTOR LOCATIONS

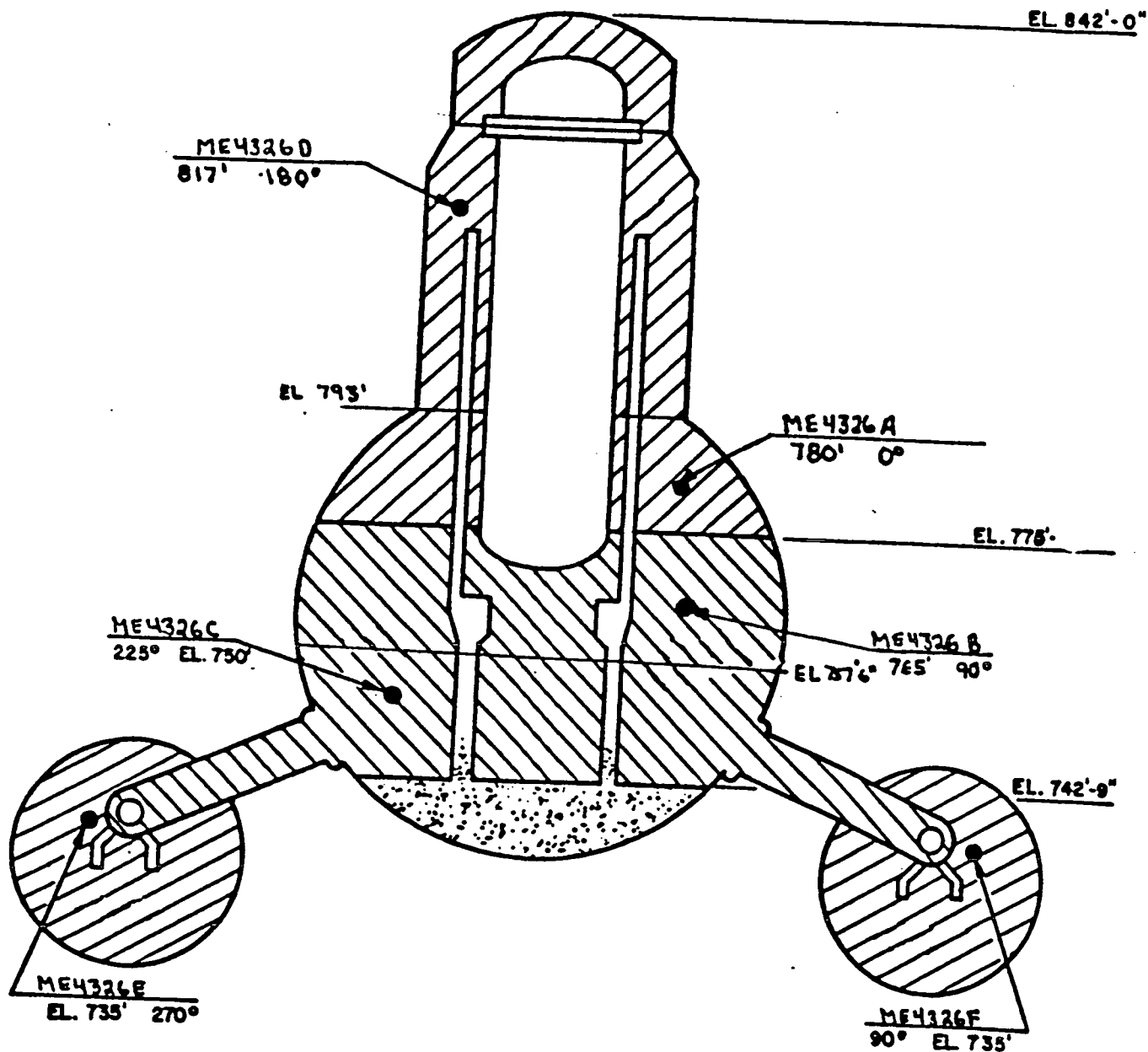


NOTES:

1. ZONE BOUNDARIES ARE APPROXIMATE, REFERENCE DAEC CAL. CAL-M93-001.
2. RTD ELEVATIONS AND AZIMUTH POSITIONS ARE APPROXIMATE

ILRT INSTRUMENTATION

ILRT DEWPOINT TEMPERATURE SENSOR LOCATIONS

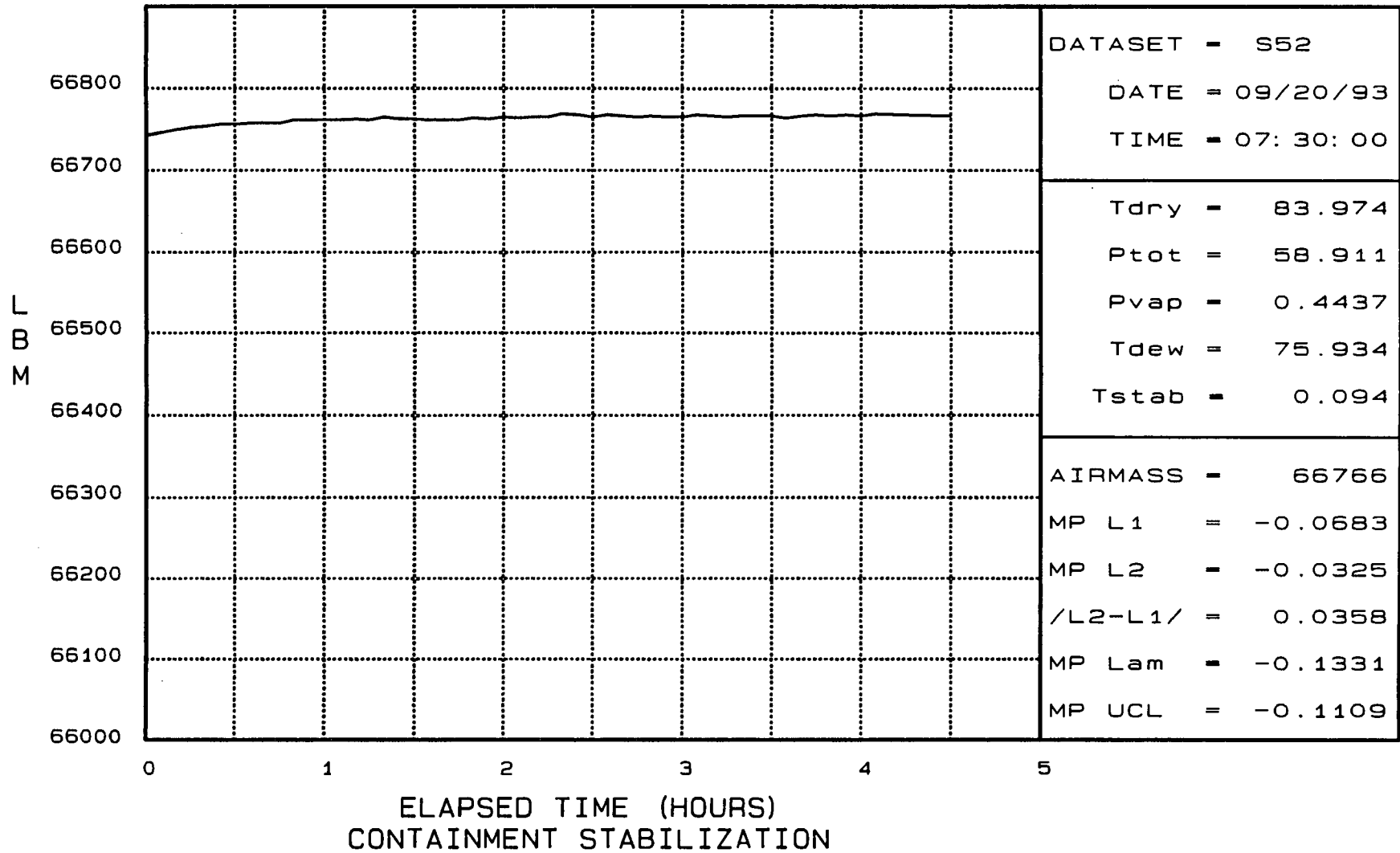


NOTES:

1. ZONE BOUNDARIES ARE APPROXIMATE,
REFERENCE DAEC CAL. CAL. M-93-001.
2. DEWPOINT TEMPERATURE SENSOR ELEVATIONS
AND. AZIMUTH POSITIONS ARE APPROXIMATE

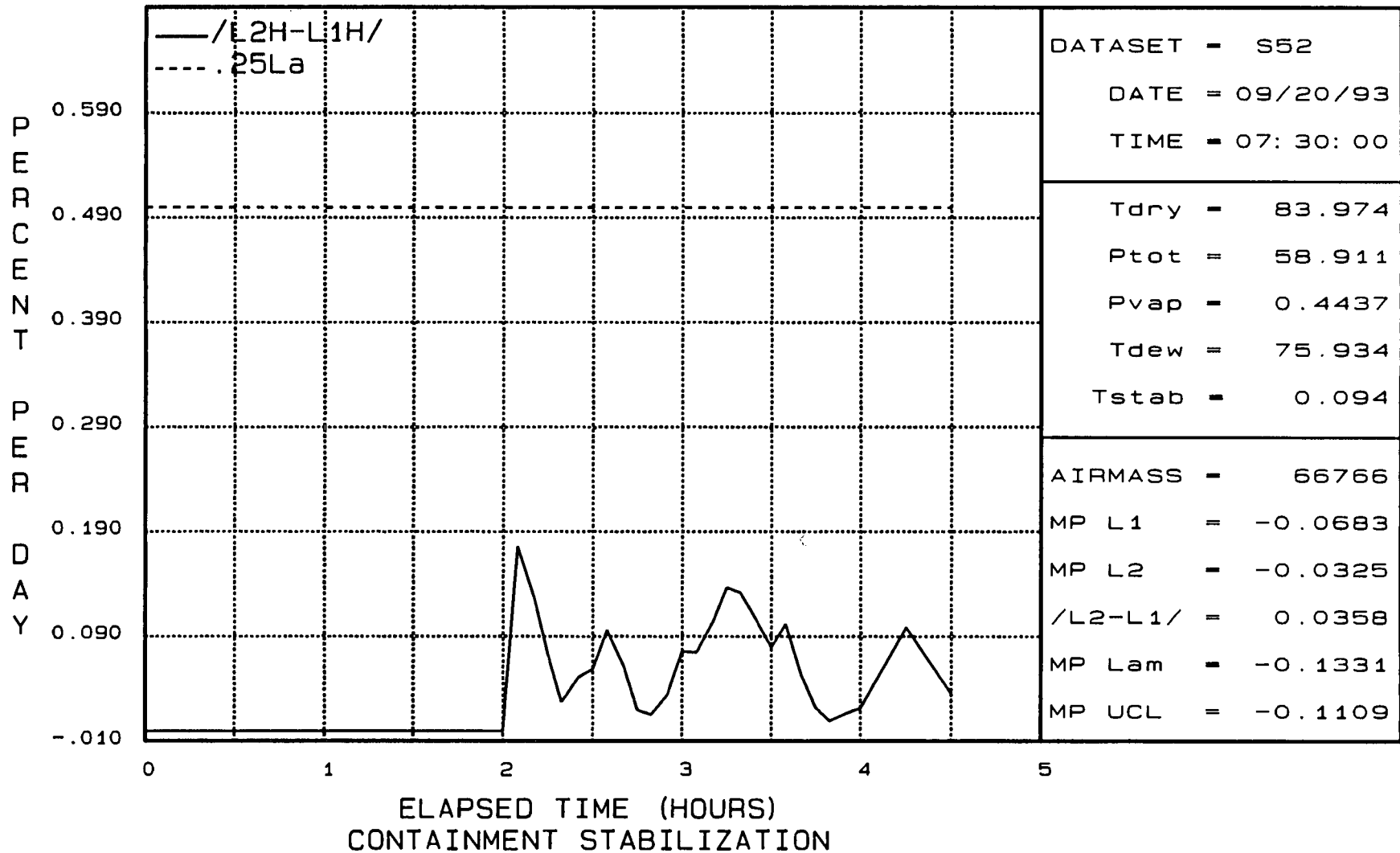
UESC G100 ILRT Results

CONTAINMENT AIR MASS

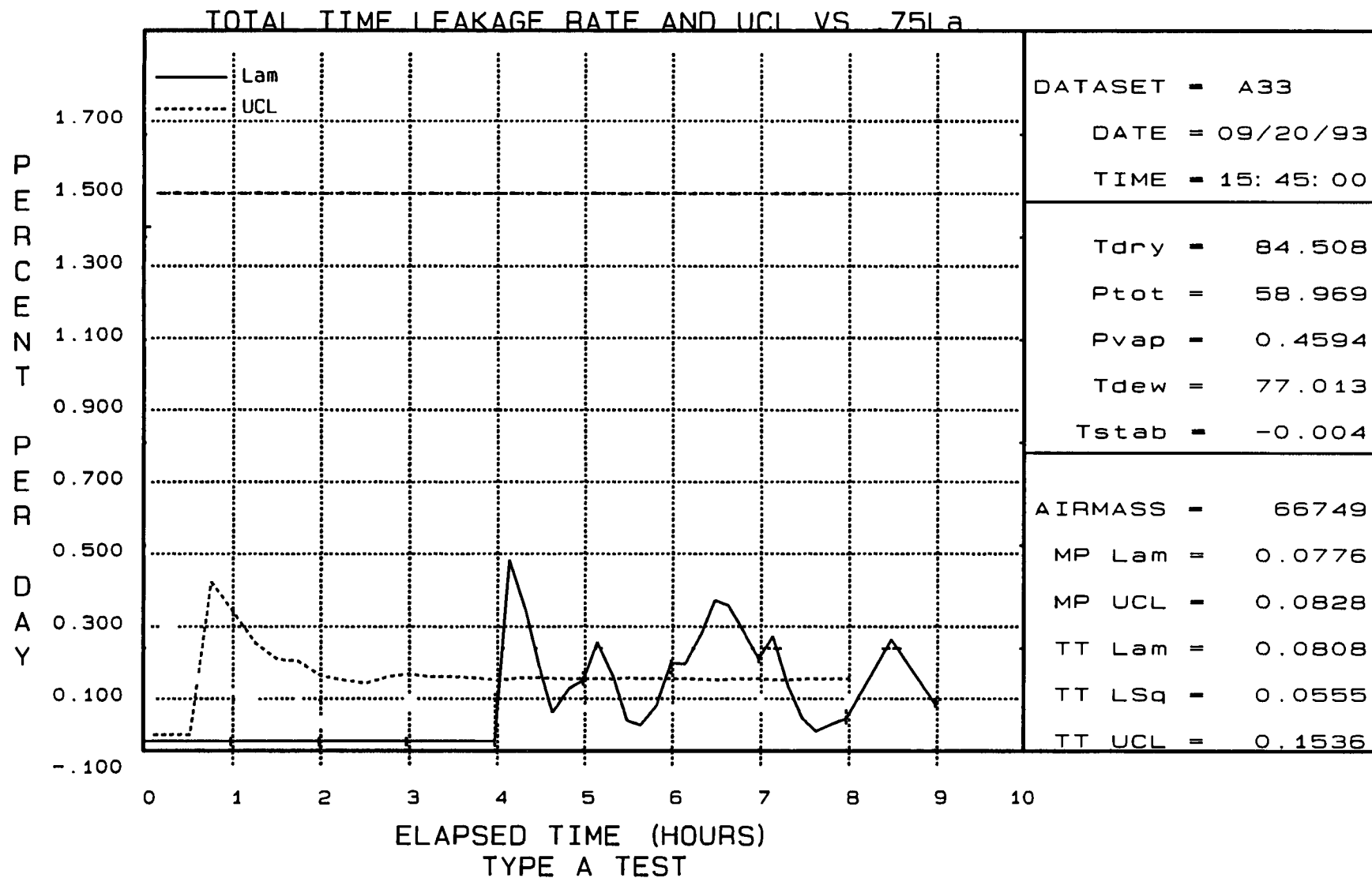


UESC G100 ILRT Results

MASS POINT SLIDING LEAKAGE VS .25La



UESC G100 ILRT Results



UESC G100 ILRT Results

TOTAL TIME LEAKAGE RATE VS VERIFICATION LIMITS

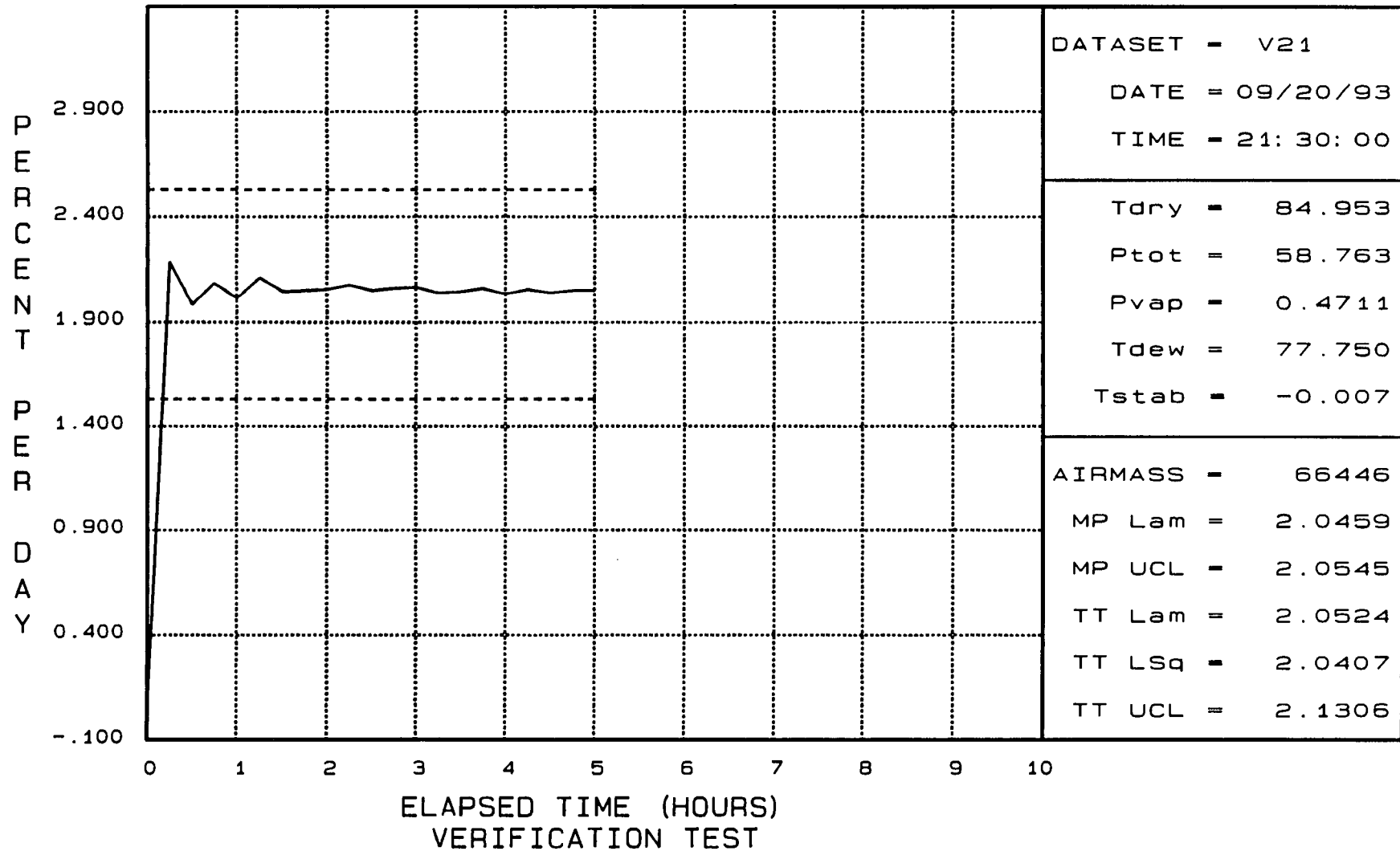


TABLE 1

ILRT CONTAINMENT AIR MASS CALCULATION PARAMETERS

DATA SET	TIME		PRESSURE		TEMPERATURE		MASS
	REAL	ELAPSED (HRS)	TOTAL (PSIA)	VAPOR (PSIA)	DRY BULB (DEG F)	DEW POINT (DEG F)	AIR (LBM)
1	09/19/93:17:57:00	0.00	14.396	0.4152	79.147	73.977	16108.2
2	09/19/93:18:12:00	0.25	14.862	0.4223	79.815	74.468	16616.3
3	09/19/93:18:27:00	0.50	15.474	0.4229	80.367	74.510	17302.1
4	09/19/93:18:42:00	0.75	16.109	0.4213	80.623	74.399	18025.4
5	09/19/93:18:57:00	1.00	16.785	0.4241	80.813	74.587	18792.4
6	09/19/93:19:12:00	1.25	17.573	0.4233	81.117	74.538	19687.3
7	09/19/93:19:27:00	1.50	18.358	0.4227	81.313	74.491	20581.8
8	09/19/93:19:42:00	1.75	19.667	0.4261	82.156	74.725	22045.6
9	09/19/93:19:57:00	2.00	21.143	0.4275	82.613	74.821	23715.2
10	09/19/93:20:12:00	2.25	22.619	0.4249	82.881	74.642	25395.3
11	09/19/93:20:27:00	2.50	24.096	0.4270	83.109	74.791	27071.5
12	09/19/93:20:42:00	2.75	25.568	0.4267	83.299	74.772	28745.4
13	09/19/93:20:57:00	3.00	27.045	0.4260	83.480	74.721	30424.8
14	09/19/93:21:12:00	3.25	28.517	0.4273	83.644	74.813	32096.0
15	09/19/93:21:27:00	3.50	29.988	0.4280	83.791	74.861	33766.9
16	09/19/93:21:42:00	3.75	31.458	0.4262	83.955	74.737	35437.5
17	09/19/93:21:57:00	4.00	32.938	0.4267	84.108	74.767	37116.7
18	09/19/93:22:12:00	4.25	34.417	0.4259	84.255	74.717	38795.5
19	09/19/93:22:27:00	4.50	35.891	0.4278	84.382	74.843	40466.3
20	09/19/93:22:42:00	4.75	37.377	0.4300	84.509	74.994	42149.6
21	09/19/93:22:57:00	5.00	38.848	0.4280	84.634	74.856	43820.0
22	09/19/93:23:12:00	5.25	40.331	0.4324	84.760	75.164	45495.8
23	09/19/93:23:27:00	5.50	41.847	0.4352	84.924	75.350	47207.1
24	09/19/93:23:42:00	5.75	43.478	0.4374	85.128	75.507	49045.4
25	09/19/93:23:57:00	6.00	45.093	0.4404	85.268	75.707	50869.4
26	09/20/93:00:12:00	6.25	46.707	0.4439	85.411	75.949	52690.2
27	09/20/93:00:27:00	6.50	48.302	0.4461	85.527	76.102	54492.6
28	09/20/93:00:42:00	6.75	49.880	0.4459	85.632	76.087	56278.9
29	09/20/93:00:57:00	7.00	51.454	0.4512	85.731	76.451	58054.3
30	09/20/93:01:12:00	7.25	53.036	0.4523	85.852	76.530	59840.3
31	09/20/93:01:27:00	7.50	54.720	0.4524	85.940	76.533	61746.8
32	09/20/93:01:42:00	7.75	56.127	0.4557	86.027	76.758	63333.9
33	09/20/93:01:57:00	8.00	56.994	0.4520	85.685	76.506	64364.7
34	09/20/93:02:12:00	8.25	57.848	0.4513	85.555	76.456	65353.2
35	09/20/93:02:27:00	8.50	58.356	0.4474	85.293	76.190	65967.8
36	09/20/93:02:42:00	8.75	58.772	0.4483	85.106	76.253	66463.5
37	09/20/93:02:50:35	8.89	59.017	0.4481	85.060	76.239	66748.5
38	09/20/93:03:00:00	9.05	58.983	0.4473	84.810	76.186	66741.3
39	09/20/93:03:05:00	9.13	58.974	0.4469	84.691	76.158	66746.1
40	09/20/93:03:10:00	9.22	58.967	0.4456	84.610	76.068	66749.5
41	09/20/93:03:15:00	9.30	58.961	0.4444	84.546	75.984	66751.9

TABLE 1

ILRT CONTAINMENT AIR MASS CALCULATION PARAMETERS

TIME		PRESSURE		TEMPERATURE		MASS	
DATA		ELAPSED	TOTAL	VAPOR	DRY BULB	DEW POINT	AIR
SET	REAL	(HRS)	(PSIA)	(PSIA)	(DEG F)	(DEG F)	(LBM)
42	09/20/93:03:20:00	9.38	58.957	0.4452	84.491	76.039	66753.1
43	09/20/93:03:25:00	9.47	58.953	0.4434	84.448	75.913	66756.0
44	09/20/93:03:30:00	9.55	58.949	0.4447	84.399	76.005	66755.9
45	09/20/93:03:35:00	9.63	58.946	0.4433	84.370	75.908	66757.6
46	09/20/93:03:40:00	9.72	58.943	0.4434	84.341	75.916	66757.7
47	09/20/93:03:45:00	9.80	58.940	0.4437	84.309	75.934	66757.9
48	09/20/93:03:50:00	9.88	58.937	0.4416	84.274	75.790	66761.1
49	09/20/93:03:55:00	9.97	58.935	0.4430	84.247	75.885	66760.6
50	09/20/93:04:00:00	10.05	58.933	0.4421	84.229	75.826	66761.5
51	09/20/93:04:05:00	10.13	58.931	0.4428	84.206	75.876	66761.2
52	09/20/93:04:10:00	10.22	58.929	0.4416	84.189	75.789	66762.5
53	09/20/93:04:15:00	10.30	58.927	0.4437	84.165	75.936	66760.7
54	09/20/93:04:20:00	10.38	58.925	0.4414	84.138	75.777	66764.4
55	09/20/93:04:25:00	10.47	58.923	0.4427	84.122	75.870	66762.4
56	09/20/93:04:30:00	10.55	58.921	0.4419	84.110	75.810	66762.7
57	09/20/93:04:35:00	10.63	58.919	0.4427	84.099	75.869	66760.7
58	09/20/93:04:40:00	10.72	58.917	0.4420	84.083	75.822	66761.2
59	09/20/93:04:45:00	10.80	58.915	0.4417	84.066	75.798	66761.4
60	09/20/93:04:50:00	10.88	58.914	0.4403	84.048	75.700	66764.1
61	09/20/93:04:55:00	10.97	58.913	0.4416	84.037	75.795	66762.7
62	09/20/93:05:00:00	11.05	58.912	0.4407	84.019	75.731	66764.8
63	09/20/93:05:05:00	11.13	58.912	0.4431	84.008	75.894	66763.5
64	09/20/93:05:10:00	11.22	58.911	0.4415	84.001	75.786	66765.0
65	09/20/93:05:15:00	11.30	58.911	0.4413	83.999	75.775	66765.4
66	09/20/93:05:20:00	11.38	58.911	0.4400	83.988	75.684	66768.3
67	09/20/93:05:25:00	11.47	58.911	0.4407	83.989	75.729	66767.4
68	09/20/93:05:30:00	11.55	58.911	0.4428	83.988	75.873	66765.2
69	09/20/93:05:35:00	11.63	58.911	0.4411	83.983	75.755	66767.7
70	09/20/93:05:40:00	11.72	58.910	0.4418	83.983	75.808	66765.8
71	09/20/93:05:45:00	11.80	58.910	0.4427	83.982	75.866	66764.9
72	09/20/93:05:50:00	11.88	58.910	0.4419	83.980	75.815	66766.0
73	09/20/93:05:55:00	11.97	58.910	0.4423	83.982	75.841	66765.3
74	09/20/93:06:00:00	12.05	58.910	0.4430	83.974	75.889	66765.5
75	09/20/93:06:05:00	12.13	58.910	0.4418	83.972	75.808	66767.0
76	09/20/93:06:10:00	12.22	58.910	0.4420	83.976	75.822	66766.4
77	09/20/93:06:15:00	12.30	58.909	0.4424	83.977	75.848	66764.6
78	09/20/93:06:20:00	12.38	58.909	0.4417	83.966	75.801	66766.7
79	09/20/93:06:25:00	12.47	58.909	0.4427	83.964	75.867	66765.9
80	09/20/93:06:30:00	12.55	58.909	0.4432	83.962	75.899	66765.7
81	09/20/93:06:35:00	12.63	58.909	0.4432	83.972	75.904	66764.3
82	09/20/93:06:40:00	12.72	58.909	0.4427	83.962	75.870	66766.1

TABLE 1

ILRT CONTAINMENT AIR MASS CALCULATION PARAMETERS

DATA SET	TIME		PRESSURE		TEMPERATURE		MASS
	REAL	ELAPSED (HRS)	TOTAL (PSIA)	VAPOR (PSIA)	DRY BULB (DEG F)	DEW POINT (DEG F)	AIR (LBM)
83	09/20/93:06:45:00	12.80	58.910	0.4426	83.966	75.857	66767.0
84	09/20/93:06:50:00	12.88	58.910	0.4428	83.964	75.878	66766.9
85	09/20/93:06:55:00	12.97	58.910	0.4414	83.968	75.777	66768.0
86	09/20/93:07:00:00	13.05	58.910	0.4428	83.967	75.872	66766.6
87	09/20/93:07:05:00	13.13	58.910	0.4412	83.959	75.766	66769.3
88	09/20/93:07:15:00	13.30	58.911	0.4431	83.963	75.893	66767.9
89	09/20/93:07:30:00	13.55	58.911	0.4437	83.974	75.934	66765.9
90	09/20/93:07:45:00	13.80	58.912	0.4436	83.979	75.927	66766.5
91	09/20/93:08:00:00	14.05	58.913	0.4452	83.991	76.039	66764.3
92	09/20/93:08:15:00	14.30	58.914	0.4453	84.002	76.045	66764.0
93	09/20/93:08:30:00	14.55	58.916	0.4464	84.010	76.124	66764.0
94	09/20/93:08:45:00	14.80	58.917	0.4467	84.023	76.145	66763.2
95	09/20/93:09:00:00	15.05	58.918	0.4465	84.033	76.130	66763.3
96	09/20/93:09:15:00	15.30	58.920	0.4476	84.043	76.203	66763.3
97	09/20/93:09:30:00	15.55	58.921	0.4480	84.058	76.232	66762.1
98	09/20/93:09:45:00	15.80	58.923	0.4468	84.068	76.152	66764.4
99	09/20/93:10:00:00	16.05	58.924	0.4482	84.077	76.244	66762.9
100	09/20/93:10:15:00	16.30	58.926	0.4488	84.091	76.288	66762.7
101	09/20/93:10:30:00	16.55	58.927	0.4499	84.115	76.365	66759.7
102	09/20/93:10:45:00	16.80	58.929	0.4503	84.131	76.391	66759.5
103	09/20/93:11:00:00	17.05	58.931	0.4499	84.140	76.359	66761.2
104	09/20/93:11:15:00	17.30	58.933	0.4522	84.153	76.522	66759.2
105	09/20/93:11:30:00	17.55	58.935	0.4521	84.174	76.512	66759.2
106	09/20/93:11:45:00	17.80	58.937	0.4508	84.191	76.423	66760.8
107	09/20/93:12:00:00	18.05	58.938	0.4530	84.216	76.576	66756.3
108	09/20/93:12:15:00	18.30	58.940	0.4531	84.228	76.582	66757.0
109	09/20/93:12:30:00	18.55	58.942	0.4529	84.243	76.568	66757.7
110	09/20/93:12:45:00	18.80	58.944	0.4527	84.274	76.556	66756.4
111	09/20/93:13:00:00	19.05	58.946	0.4547	84.289	76.690	66754.6
112	09/20/93:13:15:00	19.30	58.948	0.4549	84.307	76.708	66754.3
113	09/20/93:13:30:00	19.55	58.950	0.4551	84.320	76.718	66754.9
114	09/20/93:13:45:00	19.80	58.952	0.4550	84.347	76.712	66753.9
115	09/20/93:14:00:00	20.05	58.954	0.4564	84.364	76.809	66752.5
116	09/20/93:14:15:00	20.30	58.957	0.4562	84.385	76.793	66753.7
117	09/20/93:14:30:00	20.55	58.959	0.4580	84.408	76.918	66751.0
118	09/20/93:14:45:00	20.80	58.961	0.4578	84.425	76.906	66751.5
119	09/20/93:15:00:00	21.05	58.963	0.4587	84.443	76.966	66750.6
120	09/20/93:15:15:00	21.30	58.965	0.4599	84.468	77.047	66748.3
121	09/20/93:15:30:00	21.55	58.967	0.4600	84.480	77.049	66749.1
122	09/20/93:15:45:00	21.80	58.969	0.4594	84.508	77.013	66748.5
123	09/20/93:16:00:00	22.05	58.972	0.4600	84.529	77.054	66748.7

TABLE 1

ILRT CONTAINMENT AIR MASS CALCULATION PARAMETERS

DATA SET	TIME		PRESSURE		TEMPERATURE		MASS
	REAL	ELAPSED (HRS)	TOTAL (PSIA)	VAPOR (PSIA)	DRY BULB (DEG F)	DEW POINT (DEG F)	AIR (LBM)
124	09/20/93:16:15:00	22.30	58.971	0.4607	84.543	77.096	66745.1
125	09/20/93:16:30:00	22.55	58.961	0.4616	84.555	77.154	66731.2
126	09/20/93:16:45:00	22.80	58.950	0.4615	84.577	77.147	66716.0
127	09/20/93:17:00:00	23.05	58.940	0.4609	84.591	77.110	66703.6
128	09/20/93:17:15:00	23.30	58.931	0.4640	84.608	77.303	66687.7
129	09/20/93:17:30:00	23.55	58.921	0.4622	84.634	77.190	66675.1
130	09/20/93:17:45:00	23.80	58.911	0.4656	84.651	77.405	66657.8
131	09/20/93:18:00:00	24.05	58.901	0.4639	84.671	77.298	66645.9
132	09/20/93:18:15:00	24.30	58.891	0.4646	84.690	77.342	66631.4
133	09/20/93:18:30:00	24.55	58.881	0.4653	84.709	77.385	66616.8
134	09/20/93:18:45:00	24.80	58.872	0.4673	84.733	77.512	66601.3
135	09/20/93:19:00:00	25.05	58.862	0.4664	84.753	77.453	66588.6
136	09/20/93:19:15:00	25.30	58.851	0.4666	84.771	77.469	66573.5
137	09/20/93:19:30:00	25.55	58.842	0.4684	84.790	77.581	66559.0
138	09/20/93:19:45:00	25.80	58.832	0.4667	84.811	77.472	66546.9
139	09/20/93:20:00:00	26.05	58.822	0.4678	84.828	77.542	66532.2
140	09/20/93:20:15:00	26.30	58.813	0.4695	84.857	77.652	66516.4
141	09/20/93:20:30:00	26.55	58.803	0.4689	84.867	77.611	66504.6
142	09/20/93:20:45:00	26.80	58.793	0.4699	84.897	77.671	66488.4
143	09/20/93:21:00:00	27.05	58.783	0.4693	84.910	77.638	66475.9
144	09/20/93:21:15:00	27.30	58.773	0.4709	84.928	77.736	66460.6
145	09/20/93:21:30:00	27.55	58.763	0.4711	84.953	77.750	66445.8

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
TESTABLE GASKETS					
X-1	Personnel Lock Equip Door	8	8	8/04/93	
X-2	Equipment Access Hatch	10	5	9/15/93	
X-4	Drywell Head Access Hatch	11	11	8/12/93	
X-6	CRD Removal Hatch	1642	5	9/09/93	
X-35A	TIP Drive	12	12	8/12/93	
X-35B	TIP Drive	20	20	8/11/93	
X-35C	TIP Drive	15	15	8/11/93	
X-35D	TIP Purge Line	24	24	8/11/93	
X-53	Spare	5	5	7/28/93	
---	Drywell Head	16	11	9/17/93	
X-58A	Stabilizer Access Port	20	20	8/13/93	
X-58B	Stabilizer Access Port	15	15	8/13/93	

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
TESTABLE GASKETS					
X-58C	Stabilizer Access Port	17	17	8/13/93	
X-58D	Stabilizer Access Port	17	17	8/13/93	
X-58E	Stabilizer Access Port	9	9	8/13/93	
X-58F	Stabilizer Access Port	30	30	8/13/93	
X-58G	Stabilizer Access Port	19	19	8/13/93	
X-58H	Stabilizer Access Port	18	18	8/13/93	
N-200A	South Torus Access Hatch	5	5	9/24/93	
N-200B	North Torus Access Hatch	5	145	9/23/93	
ELECTRICAL PENETRATIONS					
Combined	X-100E,F,&G, X-103, X-104A,B	7	7	7/28/93	
Combined	X-100B,C, X-104C,D	10	10	7/30/93	
Combined	X-101C, X-105D, X-106C	14	14	7/28/93	
Combined	X-101A, X-105B, X-106A	5	5	7/28/93	
N-230B	Vacuum Breaker Cables	5	5	7/29/93	

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
FLANGE O-RINGS					
X-25	Drywell Purge Outlet CV-4302	5	5	9/17/93	Replaced O-Ring
X-26	Drywell Purge Outlet CV-4307	5	5	8/24/93	Replaced O-Ring
N-205	Torus Purge Outlet CV-4300	5	5	9/07/93	Replaced O-Ring
N-213A	South Torus Drain Line Flange	5	5	8/05/93	
N-213B	North Torus Drain Line Flange	5	5	7/30/93	
N-220	Torus Purge Supply CV-4308	5	5	8/24/93	Replaced O-Ring
N-231	RB/Torus Vacuum Breaker CV-4304	5	5	9/07/93	Replaced O-Ring
N-231	RB/Torus Vacuum Breaker CV-4305	5	105	9/09/93	Replaced O-Ring
N-217	CS Discharge Relief, PSV-2109	5	10	9/14/93	
N-218	CS Discharge Relief, PSV-2129	5	33	9/11/93	
VALVE BONNETS					
X-39A	Drywell Spray, MO-2000	162	162	8/26/93	
N-211B	Torus Spray, MO-2006	217	217	8/26/93	
X-39B	Drywell Spray, MO-1902	306	306	9/14/93	
N-211A	Torus Spray, MO-1933	17	17	9/14/93	

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
EXPANSION BELLOWS					
X-7A	Main Steam Line	115	115	8/03/93	
X-7B	Main Steam Line	104	104	8/03/93	
X-7C	Main Steam Line	483	483	8/02/93	
X-7D	Main Steam Line	63	63	8/03/93	
X-9A	Reactor Feedwater	21	21	8/01/93	
X-9B	Reactor Feedwater	548	548	8/02/93	
X-10	RCIC Steam Supply	24	24	8/01/93	
X-11	HPCI Steam Supply	29	29	8/01/93	
X-12	RHR Shutdown Cooling Supply	18	18	7/30/93	
X-13A	A RHR LPCI Inject	5	5	7/30/93	
X-13B	B RHR LPCI Inject	5	5	7/30/93	
X-15	RWCU Supply	5	5	8/05/93	
X-16A	A Core Spray Discharge	5	5	8/04/93	
X-16B	B Core Spray Discharge	19	19	7/30/93	

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
EXPANSION BELLOWS					
X-17	RHR Head Spray	57	57	7/31/93	
N-201A	Drywell to Torus Downcomer	10	10	7/29/93	
N-201C	Drywell to Torus Downcomer	7	7	7/29/93	
N-201B	Drywell to Torus Downcomer	92	92	7/29/93	
N-201D	Drywell to Torus Downcomer	5	5	7/29/93	
N-201E	Drywell to Torus Downcomer	5	5	7/29/93	
N-201G	Drywell to Torus Downcomer	68	68	7/29/93	
N-201F	Drywell to Torus Downcomer	5	5	7/29/93	
N-201H	Drywell to Torus Downcomer	5	5	7/29/93	
N-213A	South Torus Inbd Drain Line	5	5	8/05/93	
N-213A	South Torus Outbd Drain Line	5	5	8/05/93	
N-213B	North Torus Inbd Drain Line	5	5	8/05/93	
N-213B	North Torus Outbd Drain Line	5	5	8/05/93	

ATTACHMENT
TYPE B 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
SHAFT STEM SEALS					
X-26	Drywell Purge Supply, CV-4307	5	6	8/24/93	
N-220	Torus Purge Supply, CV-4308	5	6	8/24/93	
TOTAL TYPE B		4439	3067		

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
7A	Main Steam	CV-4412 CV-4413 MO-8401A	5428 10520 400	10920	5428	5428 1672 77	5428	1749	Replaced seat, disc, and operator. Rebuilt operator.
7B	Main Steam	CV-4415 CV-4416 MO-8401B	4226 4226 16	4242	4226	4226 4999 16	5015	4226	Repacked valve.
7C	Main Steam	CV-4418 CV-4419 MO-8401C	2756 2756 198	2954	2756	2756 580 198	2756	778	Repacked valve.
7D	Main Steam	CV-4420 CV-4421 MO-8401D	5428 57773 15	57788	5428	5428 344 15	5428	359	Machined seat, bore, replaced disc, oper.
8	Steam Drain	MO-4423 MO-4424	155 110	155	110	155 186	186	155	Overhauled operator, repacked.
9A	Feedwater	V-14-03 MO-4441 MO-2312	366 86	366	86	366 29	366	29	Rebuilt operator. Overhauled operator.

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
9B	Feedwater	V-14-01 MO-2740 MO-2512 MO-4442	1685 209	1685	209	1685 249	1685	249	Overhauled operator. Rebuilt operator.
10	RCIC Cond Rtn	CV-2410 CV-2411	209 156	209	156	209 156	209	156	
10	RCIC Steam	MO-2400 MO-2401	282 2186	2186	282	923 1182	1182	923	Overhauled operator. Overhauled operator.
11	HPCI Steam	MO-2238 MO-2239	332 302	332	302	332 302	332	302	Mid-cycle replaced stem, repacked.
11	HPCI Cond Rtn	CV-2211 CV-2212	7 8	8	7	7 8	8	7	
15	RWCU	MO-2700 MO-2701	19 1096	1096	19	19 1028	1028	19	Overhauled operator.
16A	Core Spray	MO-2117 MO-2115	20 23	23	20	20 23	23	20	
16B	Core Spray	MO-2137 MO-2135	5 30	30	5	7 30	30	7	Repacked valve.
19	Drywell Drain	CV-3704 CV-3705	25640 28290	28290	25640	2462 603	2462	603	Replaced valve. Replaced valve.

ATTACHMENT 17

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
20	Demin Water	V-09-111 V-09-065	32 29	32	29	32 29	32	29	
21	Service Air	V-30-287 Blind Flange	11	11	6	11	11	6	
22 & 229A	N2 Comp Disch	V-43-214 CV-4371C CV-4371A	713 244 463	957	463	713 244 463	957	463	
23A	DW Cool Supply	CV-5718A V-57-077	594	594	594	594	594	594	
23B	DW Cool Supply	CV-5718B V-57-078	1847	1847	1847	1847	1847	1847	
24A	DW Cool Return	CV-5704A V-57-075	3287	3287	3287	3287	3287	3287	
24B	DW Cool Return	CV-5704B V-57-076	901	901	901	901	901	901	
25	DW Purge Out	CV-4302 CV-4303 CV-4310	252 50	302	176	79 50	129	90	Replaced T-seal, overhauled operator. Replaced T-seal, overhauled operator.

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
26 & 220	DW Purge Sup	CV-4306	282	282	141	205	205	103	Replaced T-seal, overhauled operator. Replaced T-seal, overhauled operator. Replaced T-seal, overhauled operator.
		CV-4307							
		CV-4308							
26& 220	DW & Torus M/UCV	CV-4311	4394	4394	2691	4394	4394	2691	
		CV-4312	2334			2334			
		CV-4313	357			357			
32	DN2 Comp Suc	CV-4378A	172	172	49	172	172	49	
		CV-4378B	49			49			
32E	Recirc A Seal	V-17-096	39	4008	39	39	572	39	
		CV-1804A	4008			572			Repaired seating surfaces, rebuilt bonnet, repacked.
32F	Recirc B Seal	V-17-083	172	172	13	172	172	13	
		CV-1804B	13			13			
35A	TIP Check	check	389	389	389	389	389	389	
35B	TIP Ball	ball	46	46	46	45	45	45	
35C	TIP Ball	ball	5	5	5	6	6	6	
35D	TIP Ball	ball	5	5	5	5	5	5	

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
36	CRD Return	V-17-053 V-17-052	54 277	277	54	54 277	277	54	
39A	CAD Supply	SV-4332A SV-4332B	265 7	265	7	265 7	265	7	
39B	CAD Supply	SV-4331A SV-4331B	132 152	152	132	132 152	152	132	
40D	Jet Pump Samp	SV-4594A SV-4595A	19 14	19	14	19 14	19	14	
40C	Jet Pump Samp	SV-4594B SV-4595B	33 89	89	33	33 89	89	33	
41	Recirc Sample	CV-4639 CV-4640	3027 33	3027	33	947 6	947	6	Replaced packing. Rebuilt operator.
42	SBLC	V-26-009 V-26-008	532 5000	5000	532	532 5000	5000	532	
46F	CAM Return	SV-8105B SV-8106B	33 20	33	20	33 20	33	20	
48	DW Drain Disch	CV-3728 CV-3729	279 162	279	162	279 162	279	162	
50B	CAM Supply	SV-8101A SV-8102A	9 9	9	9	9 9	9	9	

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
50D	CAM Supply	SV-8105A SV-8106A	5 5	5	5	5 5	5	5	
50E	CAM Supply	SV-8103A SV-8104A	5 5	5	5	5 5	5	5	
54	RBCCW Return	MO-4841A	121	121	121	55	55	55	Repaired operator.
55	RBCCW Supply	MO-4841B	303	303	303	152	152	152	Repaired operator.
56C	CAM Supply	SV-8101B SV-8102B	22 25	25	22	22 25	25	22	
56D	CAM Supply	SV-8103B SV-8104B	25 22	25	22	25 22	25	22	
205	Torus Exh Out	CV-4300 CV-4301 CV-4357 CV-4309	765 7930	8695	765	8560 496	9056	4776	Replaced T-seal, rebuilt operator. Replaced T-seal, rebuilt operator. Replaced valve.
211A	CAD Supply	SV-4333A SV-4333B	96 98	98	96	96 98	98	96	
211B	CAD Supply	SV-4334A SV-4334B	23 19	23	19	23 19	23	19	

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
212	RCIC Exhaust	V-24-008 V-24-023	233	233	117	220	220	110	Rebuilt valve.
212	RCIC Ex Vac Bkr	V-24-046 V-24-047	536 167	536	167	536 167	536	167	
214	HPCI Exhaust	V-22-017 V-22-016	13082	13082	6541	628	628	314	Inspected internals.
214	HPCI Ex Vac Bkr	V-22-063 V-22-064	704 506	704	506	895 506	895	506	Inspected internals.
219	HPCI/RCIC Exh	MO-2290B MO-2290A	617 403	617	403	157 160	160	157	Replaced packing. Replaced packing, repaired operator.
222	HPCI Cond Ret	V-22-022 V-22-021	10	10	5	30	30	15	Inspected internals. Inspected internals.
229B	CAM Supply	SV-8107A SV-8108A	18 55	55	18	18 55	55	18	
229C	CAM Supply	SV-8109A SV-8110A	50 48	50	48	50 48	50	48	
229F	CAM Return	SV-8109B SV-8110B	7 5	7	5	7 5	7	5	
229G	CAM Supply	SV-8107B SV-8108B	5 5	5	5	5 5	5	5	

ATTACHMENT
TYPE C 1993 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
229H	Pass Sam Ret	SV-8772A SV-8772B	20 19	20	19	20 19	20	19	
231	Vacuum Breaker	CV-4304 V-43-169	989	989	495	17	17	9	Replaced T-seal, rebuilt operator.
231	Vacuum Breaker	CV-4305 V-43-168	118	118	59	73	73	37	Replaced T-seal, rebuilt operator.
TOTAL TYPE C				162564	66097		59081	27670	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
TESTABLE GASKETS					
X-1	Personnel Lock Equip Door	0	0	2/28/92	
X-2	Equipment Access Hatch	0	0	4/18/92	
X-4	Drywell Head Access Hatch	0	0	4/16/92	
X-6	CRD Removal Hatch	0	2645	4/18/92	
X-35A	TIP Drive	0	0	3/09/92	
X-35B	TIP Drive	0	0	3/09/92	
X-35C	TIP Drive	0	0	3/09/92	
X-35D	TIP Purge Line	0	0	3/09/92	
X-53	Spare	0	0	2/28/92	
---	Drywell Head	21	0	4/16/92	
X-58A	Stabilizer Access Port	11032	86	4/08/92	
X-58B	Stabilizer Access Port	0	0	3/17/92	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
TESTABLE GASKETS					
X-58C	Stabilizer Access Port	0	0	3/17/92	
X-58D	Stabilizer Access Port	0	0	3/17/92	
X-58E	Stabilizer Access Port	0	0	3/16/92	
X-58F	Stabilizer Access Port	0	0	3/16/92	
X-58G	Stabilizer Access Port	0	0	3/16/92	
X-58H	Stabilizer Access Port	0	0	3/16/92	
N-200A	South Torus Access Hatch	0	102	3/19/92	
N-200B	North Torus Access Hatch	0	0	4/11/92	
ELECTRICAL PENETRATIONS					
X-100B	Neutron Monitoring	103	0	3/06/92	
X-100C	Neutron Monitoring	103	0	3/06/92	
X-100E	Neutron Monitoring	0	0	3/13/92	
X-100F	Neutron Monitoring	0	0	3/14/92	
X-100G	RPV Vibration Monitoring	0	0	3/12/92	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
X-101A	Recirc Pump Power	0	0	3/13/92	
X-101C	Recirc Pump Power	103	103	3/09/92	
X-103	Thermocouples	0	0	3/14/92	
X-104A	CRD Rod Position Indication	0	0	3/14/92	
X-104B	CRD Rod Position Indication	0	0	3/14/92	
X-104C	CRD Rod Position Indication	103	103	3/06/92	
X-104D	CRD Rod Position Indication	103	103	3/06/92	
X-105B	Power and Control	0	0	3/13/92	
X-105D	Power and Control	20	20	3/09/92	
X-106A	Power and Control	0	0	3/13/92	
X-106C	Power and Control	0	0	3/09/92	
N-230B	Vacuum Breaker Cables	17	17	3/06/92	
SHAFT STEM SEALS					
X-26	Drywell Purge Supply, CV-4307	17	17	3/01/92	
N-220	Torus Purge Supply, CV-4308	102	102	3/01/92	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
FLANGE O-RINGS					
X-25	Drywell Purge Outlet CV-4302	17	17	2/29/92	
X-26	Drywell Purge Outlet CV-4307	0	0	3/01/92	
N-205	Torus Purge Outlet CV-4300	681	681	2/29/92	
N-213A	South Torus Drain Line Flange	102	102	3/14/92	
N-213B	North Torus Drain Line Flange	92	92	3/02/92	
N-220	Torus Purge Supply CV-4308	102	102	3/01/92	
N-231	RB/Torus Vacuum Breaker CV-4304	0	0	3/04/92	
N-231	RB/Torus Vacuum Breaker CV-4305	17	17	3/17/92	
VALVE BONNETS					
X-39A	Drywell Spray, MO-2000	103	103	3/09/92	
N-211B	Torus Spray, MO-2006	102	102	3/06/92	
X-39B	Drywell Spray, MO-1902	710	710	3/16/92	
N-211A	Torus Spray, MO-1933	102	102	3/16/92	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
EXPANSION BELLOWS					
X-7A	Main Steam Line	115	115	3/06/92	
X-7B	Main Steam Line	90	0	4/07/92	
X-7C	Main Steam Line	29	29	3/06/92	
X-7D	Main Steam Line	33	33	3/06/92	
X-9A	Reactor Feedwater	61	61	3/06/92	
X-9B	Reactor Feedwater	45	45	3/06/92	
X-10	RCIC Steam Supply	126	0	4/07/92	
X-11	HPCI Steam Supply	17	17	3/06/92	
X-12	RHR Shutdown Cooling Supply	0	0	3/05/92	
X-13A	A RHR LPCI Inject	0	0	4/07/92	
X-13B	B RHR LPCI Inject	72	0	4/07/92	
X-15	RWCU Supply	102	0	4/09/92	
X-16A	A Core Spray Discharge	102	102	3/13/92	
X-16B	B Core Spray Discharge	0	0	4/07/92	

ATTACHMENT
TYPE B 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
EXPANSION BELLOWS					
X-17	RHR Head Spray	102	102	3/14/92	
N-201A	Drywell to Torus Downcomer	92	92	3/02/92	
N-201B	Drywell to Torus Downcomer	92	92	3/02/92	
N-201C	Drywell to Torus Downcomer	92	92	3/02/92	
N-201D	Drywell to Torus Downcomer	92	92	3/02/92	
N-201E	Drywell to Torus Downcomer	92	92	3/02/92	
N-201G	Drywell to Torus Downcomer	92	92	3/02/92	
N-201F	Drywell to Torus Downcomer	102	0	4/08/92	
N-201H	Drywell to Torus Downcomer	102	0	4/08/92	
N-213A	South Torus Inbd Drain Line	102	102	3/14/92	
N-213A	South Torus Outbd Drain Line	16	16	3/14/92	
N-213B	North Torus Inbd Drain Line	102	0	4/08/92	
N-213B	North Torus Outbd Drain Line	102	0	4/08/92	
TOTAL TYPE B		15724	6500		

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
7A	Main Steam	CV-4412 CV-4413	29898 5774	29898	5774	554 554	554	554	Machined seat, bore. Machined seat, bore, replaced stem, disc.
7B	Main Steam	CV-4415 CV-4416	1198 1198	1198	1198	1198 1198	1198	1198	
7C	Main Steam	CV-4418 CV-4419	5073 1247	5073	1247	188 188	188	188	Machined seat, bore, replaced stem, disc. Replaced stem.
7D	Main Steam	CV-4420 CV-4421	8051 2548	8051	2548	32 2548	2548	32	Machined seat, bore, replaced stem, disc.
8	Steam Drain	MO-4423 MO-4424	718 705	718	705	0 705	705	0	
9A	Feedwater	V-14-03 MO-4441 MO-2312	718 6917	6917	718	1115 1013	1115	1013	Removed operator, rebuilt valve. Overhauled operator.

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
9B	Feedwater	V-14-01	408217	408217	2043	507	1221	507	Removed operator, rebuilt valve. Overhauled operator.
		MO-2740	2043			1221			
		MO-2512							
		MO-4442							
10	RCIC Cond Rtn	CV-2410	102	102	102	102	102	102	Replaced packing, Overhauled operator. Overhauled operator.
		CV-2411	102			102			
10	RCIC Steam	MO-2400	92	2137	92	1100	2645	1100	
		MO-2401	2137			2645			
11	HPCI Steam	MO-2238	750	750	360	750	750	360	
		MO-2239	360			360			
11	HPCI Cond Rtn	CV-2211	101	102	101	101	102	101	
		CV-2212	102			102			
15	RWCU	MO-2700	590	2299	590	2128	2299	2128	Overhauled operator.
		MO-2701	2299			2299			
16A	Core Spray	MO-2117	102	102	102	62	106	62	Overhauled operator.
		MO-2115	102			106			
16B	Core Spray	MO-2137	54	710	54	54	163	54	
		MO-2135	710			163			
19	Drywell Drain	CV-3704	17	687	17	17	687	17	
		CV-3705	687			603			

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
20	Demin Water	V-09-111 V-09-065	102 102	102	102	102 102	102	102	
21	Service Air	V-30-287 Blind Flange	0	0	0	0	0	0	
22 & 229A	N2 Comp Disch	V-43-214 CV-4371C CV-4371A	1368 662 662	2030	662	1368 662 662	2030	662	
23A	DW Cool Supply	CV-5718A V-57-077	2289	2289	2289	2289	2289	2289	
23B	DW Cool Supply	CV-5718B V-57-078	713	713	713	713	713	713	
24A	DW Cool Return	CV-5704A V-57-075	92	92	92	92	92	92	
24B	DW Cool Return	CV-5704B V-57-076	1175	1175	1175	1175	1175	1175	
25	DW Purge Out	CV-4302 CV-4303 CV-4310	662 68	730	399	662 68	730	399	

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
26 & 220	DW Purge Sup	CV-4306 CV-4307 CV-4308	2634	2634	1317	2634	2634	1317	
26& 220	DW & Torus M/UCV	4311 CV-4312 CV-4313	6917 1459 369	6917	1828	6917 1459 369	6917	1828	
32	DN2 Comp Suc	CV-4378A CV-4378B	86 17	86	17	86 17	86	17	
32E	Recirc A Seal	V-17-096 CV-1804A	123 112	123	112	123 112	123	117	
32F	Recirc B Seal	V-17-083 CV-1804B	86 481	481	86	86 481	481	86	
35A	TIP Check	check	710	710	710	710	710	710	
35B	TIP Ball	ball	43	43	43	45	45	45	
35C	TIP Ball	ball	0	0	0	0	0	0	
35D	TIP Ball	ball	0	0	0	0	0	0	

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
36	CRD Return	V-17-053 V-17-052	479 112	479	112	479 112	479	112	
39A	CAD Supply	SV-4332A SV-4332B	684 681	684	681	684 681	684	681	
39B	CAD Supply	SV-4331A SV-4331B	684 166	684	166	684 166	684	166	
40D	Jet Pump Samp	SV-4594A SV-4595A	102 102	102	102	102 102	102	102	
40C	Jet Pump Samp	SV-4594B SV-4595B	94 0	94	0	94 0	94	0	
41	Recirc Sample	CV-4640 CV-4639	26	26	13	26 18	26	18	Rebuilt operator
42	SBLC	V-26-009 V-26-008	573 3039	3039	573	573 3039	3039	573	
46F	CAM Return	SV-8105B SV-8106B	102 102	102	102	102 102	102	102	
48	DW Drain Disch	CV-3728 CV-3729	102 102	102	102	102 102	102	102	
50B	CAM Supply	SV-8101A SV-8102A	0 0	0	0	0 0	0	0	

ATTACHMENT 18

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
50D	CAM Supply	SV-8105A SV-8106A	0 0	0	0	0 0	0	0	
50E	CAM Supply	SV-8103A SV-8104A	0 0	0	0	0 0	0	0	
54	RBCCW Return	MO-4841A	687	687	687	88	88	88	Repaired operator.
55	RBCCW Supply	MO-4841B	684	684	684	700	700	700	Repaired operator.
56C	CAM Supply	SV-8101B SV-8102B	0 0	0	0	0 0	0	0	
56D	CAM Supply	SV-8103B SV-8104B	132 137	137	132	132 137	137	132	
205	Torus Exh Out	CV-4300 CV-4301 CV-4357 CV-4309	684 8647	9331	684	0 8647	8647	0	Installed hard pipe vent.
211A	CAD Supply	SV-4333A SV-4333B	77 75	77	75	77 75	77	75	
211B	CAD Supply	SV-4334A SV-4334B	507 92	507	92	507 92	507	92	

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
212	RCIC Exhaust	V-24-008 V-24-023	53	53	27	53	53	27	
212	RCIC Ex Vac Bkr	V-24-046 V-24-047	540 402	540	402	540 175	540	175	Inspected internals.
214	HPCI Exhaust	V-22-017 V-22-016	6523	6523	3262	6523	6523	3262	
214	HPCI Ex Vac Bkr	V-22-063 V-22-064	1064 916	1064	916	1064 916	1064	916	
219	HPCI/RCIC Exh	MO-2290B MO-2290A	710 659	710	659	710 659	710	659	
222	HPCI Cond Ret	V-22-022 V-22-021	9290	9290	4645	461	461	231	Inspected internals. Rebuilt.
229B	CAM Supply	SV-8107A SV-8108A	0 0	0	0	0 0	0	0	
229C	CAM Supply	SV-8109A SV-8110A	31 31	31	31	31 31	31	31	
229F	CAM Return	SV-8109B SV-8110B	0 17	17	0	0 17	17	0	
229G	CAM Supply	SV-8107B SV-8108B	17 0	17	0	17 0	17	0	

ATTACHMENT
TYPE C 1992 LOCAL LEAKAGE RATE TEST DATA
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Found MXPLR	As-Found MNPLR	As-Left Leakage	As-Left MXPLR	As-Left MNPLR	Remarks
229H	Pass Sam Ret	SV-8772A SV-8772B	92 92	92	92	92 92	92	92	
231	Vacuum Breaker	CV-4304 V-43-169	659	659	330	659	659	330	
231	Vacuum Breaker	CV-4305	0	0	0	0	0	0	
TOTAL TYPE C				520817	39764		58145	25624	

ATTACHMENT
 DRYWELL AIRLOCK TEST DATA
 (SCCM)

Pen No.	System Name	As-Found Leakage	As-Left Leakage	Date	Remarks
TESTABLE GASKETS					
X-1	Personnel Airlock	9722	9722	09/20/90	
		8413	8413	12/14/90	
		6540	6540	06/29/91	
		6049	6049	04/22/92	
		8869	8869	01/28/93	
		6413	6413	09/19/93	

ATTACHMENT
MID-CYCLE LOCAL LEAKAGE RATE TESTING DATA FOR TESTING SINCE RFO-10
(SCCM)

Pen No.	System Name	Equipment	As-Found Leakage	As-Left Leakage	Date	Remarks
7C	Main Steam	CV4418	40592	0	6/29/91	Replaced disc Machined seat
		CV4419	610	610	6/24/91	
9A	Feedwater	V14-003	295	295	6/27/91	
11A	HPCI Steam	MO2239	-	16	8/20/92	Replaced stem Repacked