

Baltimore Gas and Electric Company

*Calvert Cliffs
Nuclear Power Plant
Unit 2*

Final Report

Primary Reactor Containment
Integrated Leakage Rate Test

Bechtel
Bechtel Corporation



January 1991

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CALVERT CLIFFS NUCLEAR POWER PLANT
BALTIMORE GAS AND ELECTRIC COMPANY
LUSBY, MARYLAND

DOCKET NUMBER 50-318

PERIODIC
PRIMARY REACTOR CONTAINMENT BUILDING
INTEGRATED LEAKAGE RATE TEST
UNIT 2
FINAL REPORT

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EXECUTIVE SUMMARY

A Primary Containment Building Integrated Leakage Rate Test (ILRT) was successfully completed at Calvert Cliffs Nuclear Power Plant - Unit 2 on January 16, 1991. The test was performed in accordance with site procedure STP-M-662-2. All acceptance criteria of the procedure were satisfied.

Listed below is the summary of the test results for mass point and total time data analysis. The actual measured leakage rate (Lam) and the 95% upper confidence limit (UCL) in units of weight percent per day are compared to the acceptance criteria.

<u>Mass Point</u>	<u>Test Results</u>	<u>Acceptance Criteria</u>
ILRT Lam	0.055	0.150
ILRT UCL	0.061	0.150
Verification Test Lam	0.254	$0.204 \leq \text{Lam} \leq 0.304$

<u>Total Time</u>	<u>Test Results</u>	<u>Acceptance Criteria</u>
ILRT Lam	0.036	0.150
ILRT UCL	0.118	0.150
Verification Test Lam	0.241	$0.185 \leq \text{Lam} \leq 0.285$

The total correction included in the above results for measured local leakage rates of penetrations not in the post LOCA lineup and volume changes during the ILRT was 0.001 %/day.

A chronological summary of events, summary of plant technical data, and discussion of test results are included in this report.

1.0 INTRODUCTION

This report presents data, analysis, and conclusions pertaining to the Calvert Cliffs Nuclear Power Plant Unit 2, Integrated Leakage Rate Test (ILRT) performed in January 1991. The Integrated Leakage Rate Test (Type A Test) is performed periodically to demonstrate that the combined leakage through the reactor containment building and those systems penetrating the containment does not exceed the allowable leakage rate specified in the Plant Technical Specifications.

The successful periodic Type A and supplemental verification tests were according to the requirements of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 2 Technical Specifications and 10CFR50, Appendix J. The Calvert Cliffs ILRT is performed by the absolute method described in ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors" and ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements." The leakage rate was calculated using formulas from the above ANSI Standards and BN-TOP-1, Revision 1, "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants." Type A and verification test durations were according to the criteria of BN-TOP-1.

The 95 percent upper confidence level was calculated for leakage rate data as required by BN-TOP-1. This is to ensure a 95 percent probability that the calculated leakage rate value is within the acceptance limits. All calculations were done with Bechtel's ILRT computer program described in Appendix A.

The temperature and pressure history and the containment air mass variations are graphed by the computer program and are contained in Appendix E.

2.0 TEST SYNOPSIS

Valve lineups were conducted on all systems to establish post-accident conditions, except for shutdown cooling, demineralized water, nitrogen supply to the safety injection tanks, and three penetrations necessary to conduct the ILRT. The inspection of the containment accessible interior and exterior surfaces was conducted prior to pressurization. No evidence of structural deterioration was noted which would have affected containment integrity or leak tightness.

Containment pressurization started at 1745 on January 14, 1991. During pressurization the containment ventilation fans were running. At 10 psig and periodically thereafter, external penetration areas were checked for leakage. The containment ventilation fans were stopped before pressurization was completed. Test pressure (50.5 psig) was reached at 0642 on January 15. The pressurization line was isolated from containment and vented. The stabilization period started at 0645 on January 15.

The temperature stabilization criteria of References 5 and 6 were first satisfied during the four hour period from 0645 to 1045 on January 15. Temperature stabilization criteria continued to be satisfied for the duration of the test.

The ILRT test period began at 1400 on January 15. Test pressure was 50.6 psig. Containment pressure and temperature were measured at 15 minute intervals using precision devices. Pressurizer level was measured. The ILRT measurement period was completed at 2300 on January 15, after 9 hours of data had satisfied all leakage rate acceptance criteria.

The verification flow was initiated at 2310 on January 15 by continuously venting 12.38 SCFM of air from the containment through a flow meter, and allowing test conditions to stabilize for one hour. The new leakage rate calculated using 4.5 hours of data from 0015 to 0445 on January 16, satisfied the verification test acceptance criteria.

The containment was depressurized to atmospheric pressure. Systems were restored as required. A summary of the test phases follows:

Test Phase	Time	Duration	Date
		hours	
Pressurization	1745-0645	13.00	January 14-15
Stabilization	0645-1400	7.25	January 15
ILRT	1400-2300	9.00	January 15
Verification Stabilization	2315-0015	1.00	January 15-16
Verification Test	0015-0445	4.50	January 16

During the test temperature sensor 4 exhibited large, rapid temperature changes inconsistent with the stable conditions indicated by all other sensors. Therefore sensor 4 was declared failed. Sensor 4 volume fraction was reassigned to the upper containment volume, sensors 1, 2, 3, 5 and 6, all above elevation 115 feet. The reassigned volume fractions, listed in Table 1, were used to calculate the containment during the entire test. Graphs of sensors are in Appendix E.

3.0 TEST DATA SUMMARY

A. Plant Information

Owner:	Baltimore Gas and Electric Company
Plant:	Calvert Cliffs Nuclear Power Plant
Location:	Lusby, Maryland
Containment Type:	Post-tensioned concrete
Date Test Completed:	January 16, 1991
Docket Number	50-318

B. Technical Data

1. Containment Net Free Air Volume	2,000,000 cu ft
2. Design Pressure	50 psig
3. Design Temperature	276 °F
4. Peak Accident Pressure, Pa	50 psig
5. Containment ILRT Average Temperature Limits	60-120 °F

C. Test Results - Type A Test

1. Test Method	Absolute
2. Data Analysis Technique	Mass Point per ANSI/ANS 56.8-1981, and Total Time per BN-TOP-1
3. Test Pressure	50.0 psig (+1.0, -0.0)
4. Maximum Allowable Leakage Rate, La	0.200 %/day
5. 75% of La	0.150 %/day
6. Integrated Leakage Rate Test Results	

	Leakage Rate	UCL*
Mass Point Analysis	0.054%/day	0.060%/day
Total Time Analysis	0.035%/day	0.117%/day

* UCL =95% Upper Confidence Level

7. Imposed Verification Leakage Rate 0.200%/day (12.38 SCFM)

8. Verification Test Results

	Leakage Rate
Mass Point Analysis	0.254%/day
Total Time Analysis	0.241%/day

9. Verification Test Limits

	Lower*	Upper*
Mass Point Analysis	0.204%/day	0.304%/day
Total Time Analysis	0.185%/day	0.285%/day

* Upper Limit = $L_o + L_{am} + 0.25L_a$, Lower Limit = $L_o + L_{am} - 0.25L_a$

10. Report Printouts

The report printouts and data plots for the ILRT and verification test calculations are provided in Appendices B-F.

11. Containment Water Level Changes

	Change	Correction
Pressurizer Level	decreased	0.000 %/day
RCDT Level	none	0.000 %/day
Quench Tank Level	none	0.000 %/day
Containment Sump	none	0.000 %/day
Total		0.000 %/day

12. Penetrations not in post-LOCA Alignment During ILRT

Penetration	System	Leakage Rate
7A	ILRT sensor connection	2 SCCM
7B	ILRT sensor connection	2 SCCM
50	ILRT pressurization	53 SCCM
20A	Nitrogen to S I tanks	354 SCCM
41	Shutdown cooling	239 SCCM
38	Demineralized Water	2 SCCM
Total		652 SCCM
		0.001 %/day

E. Test Results - Type B and C

Outage Date	LLRT maximum path leakage		Acceptance Criteria
	As Found	As left	
1987	70,334 SCCM	26,779 SCCM	0.6 La = 207,700 SCCM
1989	1,007,385 SCCM	28,937 SCCM	0.6 La = 207,700 SCCM

Local leakage rate test results are provided in Appendix G.
The report of LLRT failure is provided in Appendix H.

F. Integrated Leakage Rate Measurement System

Instrument (no. of sensors used during the test)	Description	Data	
1. Absolute Pressure (2)	Mensor Quartz Pressure Gage Model 10100	Range:	0-100 psia
		Accuracy:	0.015% reading
		Sensitivity:	0.001 psia
		Repeatability:	0.001 psia
		Calibration Date:	1-14-91
2. Drybulb Temperature (18)	100 ohm Platinum RTD Volumetrics Part VSTD-347	Range:	60-120°F
		Accuracy:	0.50 °F
		Sensitivity:	0.01 °F
		Repeatability:	0.01 °F
		Calibration Date:	1-14-91
3. Dewpoint Temperature (6)	EG&G Model No. 660	Range:	32-120°F
		Accuracy:	0.54 °F
		Sensitivity:	0.10 °F
		Repeatability:	0.01 °F
		Calibration Date:	1-14-91
4. Flow Meter (1)	Thermal Mass	Range:	0-20 scfm
		Accuracy:	1% full scale
		Sensitivity:	1% full scale
		Resolution:	0.01 scfm
		Calibration Date:	1-14-91

Drybulb and dewpoint temperature sensor locations and volume fractions are provided in Table 1.

Instrument Selection Guide (ISG) calculated per ANSI/ANS 56.8, Appendix G, for the nine hour test is 0.007 %/day. The calculation is provided in Appendix C of this report.

4.0 ANALYSIS AND INTERPRETATION

The data rejection criterion from ANSI 56.8, reference 5, was used to identify outliers at the 5% rejection level. No data points were rejected.

The general guidelines to identify failed sensors are as follows. Graphs of each individual sensor vs time are displayed during the test and printed later, see Appendix E. The trend of each sensor should be similar to the other sensors in the same region of the containment. Deviations of sensor readings not exhibited by other sensors in the same region greater than twice the instrument accuracy may indicate a failed sensor. During the test, sensor 4 was declared failed.

4.1 ILRT Test corrections

During the ILRT, several penetrations were not in post-LOCA alignment. A correction based on the Local Leakage Rate Test results for these penetrations, 0.001 percent per day, is added to the ILRT results. No correction for containment volume changes is needed.

The total leakage rate correction for penetrations not in post-LOCA alignment and containment free air volume changes is 0.001 percent per day, rounded to the nearest 0.001.

4.2 "Adjusted" Leakage Rate

The calculated leakage rates during the ILRT were 0.054 %/day (mass point) and 0.035 %/day (total time). The calculated 95% upper confidence levels were 0.060 %/day (mass point) and 0.117 %/day (total time). Adding the total leakage rate corrections for penetrations not in post-LOCA alignment and containment water level changes yields the corrected leakage rates as follows:

	Leakage Rates, %/day			
	Mass Point		Total Time	
	Leakage Rate	UCL	Leakage Rate	UCL
Calculated	0.054	0.060	0.035	0.117
Corrections	0.001	0.001	0.001	0.001
Corrected	0.055	0.061	0.036	0.118

Since the corrected 95% upper confidence levels for both mass point and total time are less than .75La (0.150%/day), the test results demonstrate the leakage through the primary containment and systems and components penetrating primary containment do not exceed the allowable leakage rates specified in the Calvert Cliffs Nuclear Power Plant FSAR and Unit 2 Technical Specifications.

5.0 REFERENCES

1. Calvert Cliffs Nuclear Power Plant, Technical Specifications.
2. Calvert Cliffs Nuclear Power Plant Procedure STP-M-662-2, Revision 4, Integrated Leakage Rate Test.
3. Code of Federal Regulations, Title 10, Part 50, Appendix J, Primary Reactor Containment Leakage Rate Testing for Water Cooled Power Reactors.
4. ANSI/ANS 45.4-1972, Leakage Rate Testing of Containment Structures for Water Cooled Power Reactors.
5. ANSI/ANS 56.8-1981, Containment System Leakage Testing Requirements.
6. Bechtel Topical Report BN-TOP-1, Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants, Revision 1, 1972.

TABLE 1

DRYBULB AND DEWPOINT TEMPERATURE SENSOR LOCATIONS

DRYBULB

Sensor No.	Elevation (ft)	Azimuth (degrees)	Distance From Center (ft)	Volume Fractions Original	Volume Fractions Reassigned
OTE5500 1	165	0	0	0.081	0.092
OTE5501 2	147	90	33	0.081	0.092
OTE5502 3	149	270	33	0.081	0.092
OTE5503 4*	120	0	45	0.072	0.000
OTE5504 5	115	0	0	0.073	0.092
OTE5505 6	125	90	40	0.072	0.092
OTE5506 7	104	180	30	0.073	0.073
OTE5508 8	75	210	40	0.064	0.064
OTE5511 9	50	270	45	0.021	0.021
OTE5509 10	65	0	0	0.042	0.042
OTE5507 11	75	150	45	0.064	0.064
OTE5510 12	50	90	40	0.022	0.022
OTE5512 13	50	210	50	0.043	0.043
OTE5513 14	50	110	45	0.043	0.043
OTE5514 15	30	210	45	0.042	0.042
OTE5517 16	20	90	30	0.042	0.042
OTE5516 17	16	240	30	0.042	0.042
OTE5515 18	30	160	45	0.042	0.042

DEWPOINT

Sensor No.	Elevation (ft)	Azimuth (degrees)	Distance From Center (ft)	Volume Fractions Original	Volume Fractions Reassigned
OAE5518 1	119	60	55	0.220	0.220
OAE5520 2	119	250	55	0.220	0.220
OAE5519 3	140	90	35	0.220	0.220
OAE5521 4	69	180	40	0.086	0.086
OAE5522 5	47	180	30	0.086	0.086
OAE5523 6	16	160	45	0.168	0.168

* Failed sensor, not used for leakage rate calculations.

APPENDIX A

Bechtel ILRT Computer Program Summary

APPENDIX A

DESCRIPTION OF BECHTEL ILRT COMPUTER PROGRAM

A. Program and Report Description

1. The Bechtel ILRT computer program is used to determine the integrated leakage rate of a nuclear primary containment structure. The program is used to compute leakage rate based on input values of time, free air volume, containment atmosphere total pressure, drybulb temperature, and dewpoint temperature (water vapor pressure). Leakage rate is computed using the Absolute Method as defined in ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements" and BN-TOP-1, Rev 1, "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants". The program is designed to allow the user to evaluate containment leakage rate test results at the jobsite during containment leakage testing. Current leakage rate values may be obtained at any time during the testing period using one of two computational methods, yielding three different report printouts.
2. In the first printout, the Total Time Report, leakage rate is computed from initial values of free air volume, containment atmosphere drybulb temperature and partial pressure of dry air, the latest values of the same parameters, and elapsed time. These individually computed leakage rates are statistically averaged using linear regression by the method of least squares. The Total Time Method is the computational technique upon which the short duration test criteria of BN-TOP-1, Rev 1, "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plant," are based.
3. The second printout is the Mass Point Report and is based on the Mass Point Analysis Technique described in ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements". The mass of dry air in the containment is computed at each data point (time) using the Equation of State, from current values of containment atmosphere drybulb temperature and partial pressure of dry air. Contained mass is "plotted" versus time and a regression line is fit to the data using the method of least squares. Leakage rate is determined from the statistically derived slope and intercept of the regression line.
4. The third printout, the Trend Report, is a summary of leakage rate values based on Total Time and Mass Point computations presented as a function of number of data points and elapsed time (test duration). The Trend Report provides all leakage rate values required for comparison to the acceptance criteria of BN-TOP-1 for conduct of a short duration test.

5. The program generates a predictor report based on "Suggested Criteria for a Short Duration ILRT", Ted Brown and Louis Estenssoro, Proceedings of the First Workshop on Containment Testing, January 18, 1982. The "predictor" is an estimate of the upper bound on the change in mass point calculated leakage rate which will occur during the next four hours. The estimate is based on the mass point calculated leakage rates and 95% UCLs during the previous four hours.
6. The program is written in a high level language and is designed for use on a micro-computer with direct data input from the data acquisition system. Brief descriptions of program use, formulae used for leakage rate computations, and program logic are provided in the following paragraphs.

B. Explanation of Program

1. The Bechtel ILRT computer program is written, for use by experienced ILRT personnel, to determine containment integrated leakage rates based on the Absolute Method described in ANSI/ANS 56.8-1981 and BN-TOP-1.
2. Information loaded into the program prior to or at the start of the test:
 - a. Number of containment atmosphere drybulb temperature sensors, dewpoint temperature (water vapor pressure) sensors and pressure gages to be used in leakage rate computations for the specific test
 - b. Volume fractions assigned to each of the above sensors
 - c. Calibration data for above sensors
 - d. Test title
 - e. Maximum allowable leakage rate at test pressure
3. Data received from the data acquisition system during the test, and used to compute leakage rates:
 - a. Time and date
 - b. Containment atmosphere drybulb temperatures
 - c. Containment atmosphere pressure(s)
 - d. Containment atmosphere dewpoint temperatures
 - e. Containment free air volume.
4. After all data at a given time are received, a Summary of Measured Data report (refer to "Program Logic," Paragraph D, "Data" option command) is printed.

5. If drybulb and dewpoint temperature sensors should fail during the test, the data from the sensor(s) are not used. The volume fractions for the remaining sensors are recomputed and reloaded into the program for use in ensuing leakage rate computations.

C. Leakage Rate Formulae

1. Computations Using the Total Time Method:

a. Measured leakage rate from data:

$$P_1 V_1 = W_1 R T_1 \quad (1)$$

$$P_i V_i = W_i R T_i \quad (2)$$

$$L_i = \frac{2400 (W_1 - W_i)}{\Delta t_i W_1} \quad (3)$$

Solving for W_1 and W_i and substituting equations (1) and (2) into (3) yields:

$$L_i = \frac{2400}{\Delta t_i} \left(1 - \frac{T_1 P_i V_i}{T_i P_1 V_1} \right) \quad (4)$$

where

W_1, W_i = Weight of contained mass of dry air at times t_1 and t_i , respectively, lbm.

T_1, T_i = Containment atmosphere drybulb temperature at times t_1 and t_i , respectively, °R.

P_1, P_i = Partial pressure of the dry air component of the containment atmosphere at times t_1 and t_i , respectively, psia.

V_1, V_i = Containment free air volume at times t_1 and t_i , respectively (constant or variable during the test), ft³.

t_1, t_i = Time at 1st and ith data points respectively, hr.

Δt_i = Elapsed time from t_1 to t_i , hr.

R = Specific gas constant for air = 53.35 ft.lbf/lbm.°R.

L_i = Measured leakage rate computed during time interval t_1 to t_i , wt.%/day.

To reduce truncation error, the computer program uses the following equivalent formulation:

$$L_i = \frac{-2400}{\Delta t_i} \left(\frac{\Delta W_i}{W_1} \right)$$

where

$$\frac{\Delta W_i}{W_1} = \frac{W_i - W_1}{W_1}$$

$$= \frac{\frac{\Delta P_i}{P_1} + \frac{\Delta V_i}{V_1} + \frac{\Delta P_i \Delta V_i}{P_1 V_1} - \frac{\Delta T_i}{T_1}}{1 + \frac{\Delta T_i}{T_1}}$$

$$\begin{aligned} \Delta P_i &= P_i - P_1 \\ \Delta V_i &= V_i - V_1 \\ \Delta T_i &= T_i - T_1 \end{aligned}$$

b. Calculated leakage rate from regression analysis:

$$\bar{L} = a + b \Delta t_N \quad (5)$$

where

\bar{L} = Calculated leakage rate, wt.%/day, as determined from the regression line.

$$a = (\Sigma L_i - b \Sigma \Delta t_i) / N \quad (6)$$

$$b = \frac{N(\Sigma L_i \Delta t_i) - (\Sigma L_i)(\Sigma \Delta t_i)}{N(\Sigma \Delta t_i^2) - (\Sigma \Delta t_i)^2} \quad (7)$$

N = Number of data points.

$$\Sigma = \sum_{i=1}^N$$

c. 95% upper confidence limit on the calculated leakage rate:

$$UCL = a + b \Delta t_N + S_{\bar{L}}$$

where

UCL = 95% upper confidence limit wt. %/day, at elapsed time Δt_N .

For $\Delta t_N < 24$

$$S_L = t_s \left[\left(\frac{\sum L_i^2 - a \sum L_i - b \sum L_i \Delta t_i}{(N-2)} \right)^{1/2} \right. \\ \left. \left[1 + \frac{1}{N} + \frac{(\Delta t_N - \bar{\Delta t})^2}{(\sum \Delta t_i^2 - (\sum \Delta t_i)^2/N)} \right]^{1/2} \right] \quad (9a)$$

$$\text{where } t_s = 1.5996 + \frac{2.37226}{N-2} + \frac{2.82250}{(N-2)^2} ;$$

For $\Delta t_N \geq 24$

$$S_L = t_s \left[\left(\frac{\sum L_i^2 - a \sum L_i - b \sum L_i \Delta t_i}{(N-2)} \right)^{1/2} \right. \\ \left. \left[\frac{1}{N} + \frac{(\Delta t_i - \bar{\Delta t})^2}{(\sum \Delta t_i^2 - (\sum \Delta t_i)^2/N)} \right]^{1/2} \right] \quad (9b)$$

$$\text{where } t_s = \frac{1.6449(N-2)^2 + 3.5283(N-2) + 0.85602}{(N-2)^2 + 1.2209(N-2) - 1.5162}$$

\bar{L}_1 = Calculated leakage rate computed using equation (5) at total elapsed time Δt_i , %/day.

$$\bar{\Delta t} = \frac{\sum \Delta t_i}{N}$$

2. Computation using the Mass Point Method:

a. Contained mass of dry air from data:

$$W_i = 144 \frac{P_i V_i}{RT_i} \quad (10)$$

where

All symbols as previously defined.

b. Calculated leakage rate from regression analysis, $W = a + b \Delta t$

$$\bar{L} = -2400 \frac{b}{a} \quad (11)$$

where

\bar{L} = Calculated leakage rate, wt.%/day, as determined from the regression line.

$$a = (\sum W_i - b \sum \Delta t_i) / N \quad (12)$$

$$b = \frac{N(\sum W_i \Delta t_i) - (\sum W_i)(\sum \Delta t_i)}{N(\sum \Delta t_i^2) - (\sum \Delta t_i)^2} \quad (13)$$

Δt_i = Total elapsed time at time of i^{th} data point, hr.

N = Number of data points.

W_i = Contained mass of dry air at i^{th} data point, lbm, as computed from equation (10).

$$\sum = \sum_{i=1}^N$$

To reduce truncation error, the computer program uses the following equivalent formulation:

$$a = W_1 \left[1 + \left(\sum \frac{\Delta W_i}{W_1} - \frac{b}{W_1} \sum \Delta t_i \right) / N \right] \quad (14)$$

$$b = W_1 \left[\frac{N \left(\sum \frac{\Delta W_i}{W_1} \Delta t_i \right) - \sum \frac{\Delta W_i}{W_1} \sum \Delta t_i}{N(\sum \Delta t_i^2) - (\sum \Delta t_i)^2} \right] \quad (15)$$

where $\frac{\Delta W_i}{W_1}$ is as previously defined.

c. 95% upper confidence limit.

$$UCL = \frac{-2400}{a} (b - S_b) \quad (16)$$

where

UCL = 95% upper confidence limit, wt.%/day.

$$S_b = t_s \frac{SN^{1/2}}{[N \sum \Delta t_i^2 - (\sum \Delta t_i)^2]^{1/2}} \quad (17)$$

$$\text{where } t_s = \frac{1.6449 (N-2)^2 + 3.5283 (N-2) + 0.85602}{(N-2)^2 + 1.2209 (N-2) - 1.5162}$$

$$S = \left[\frac{\sum [W_i - (a + b \Delta t_i)]^2}{N-2} \right]^{1/2}$$

$$= W_1 \left\{ \frac{1}{N-2} \left[\sum (\Delta W_i / W_1)^2 - [\sum (\Delta W_i / W_1)]^2 / N - \frac{[\sum (\Delta W_i / W_1) \Delta t_i - \sum (\Delta W_i / W_1) (\sum \Delta t_i) / N]^2}{\sum (\Delta t_i^2) - (\sum \Delta t_i)^2 / N} \right] \right\}^{1/2} \quad (18)$$

d. Predictor:

$$\text{Predictor} = \frac{100 [2(UCL-L) + 4 (|B| + 2 S_A)]}{La}$$

where

UCL = 95% upper confidence limit of mass point calculated leakage rate at end of test.

L = Mass point calculated leakage rate at end of test.

B = Value of linear regression analysis slope of mass point calculated leakage rate vs. time for last 4 hours of test data.

S_A = Linear regression analysis standard deviation of slope.

La = Allowable leakage rate.

In terms of elapsed time, Δt and mass point calculated leakage rate Lm_i calculated at the end of i^{th} time interval.

$$A = \frac{1}{M} \left[\sum_{4 \text{ hr}} Lm_i - B \sum_{4 \text{ hr}} \Delta t_i \right] \quad (19)$$

$$B = \frac{M \sum_{4 \text{ hr}} Lm_i \Delta t_i - \sum_{4 \text{ hr}} Lm_i \sum_{4 \text{ hr}} \Delta t_i}{M \sum_{4 \text{ hr}} \Delta t_i^2 - \left(\sum_{4 \text{ hr}} \Delta t_i \right)^2} \quad (20)$$

$$S_A = \sqrt{\frac{\sum_{4 \text{ hr}} Lm_i - A \sum_{4 \text{ hr}} Lm_i - B \sum_{4 \text{ hr}} Lm_i \Delta t_i}{(M-2) \left[M \sum_{4 \text{ hr}} \Delta t_i^2 - \left(\sum_{4 \text{ hr}} \Delta t_i \right)^2 \right]}} \quad (M) \quad (21)$$

Lm_i = mass point calculated leakage rate evaluated using data up to time Δt_i .

4 hr = summation over last 4 hours of test data.

$$\sum = \sum_{N-M+1}^N$$

M = number of data points for last 4 hours of test.

D. Program Logic

1. The Bachtel ILRT computer program logic flow is controlled by a set of user options. The user options and a brief description of their associated function are presented below.

<u>OPTION</u> <u>COMMAND</u>	<u>FUNCTION</u>
	After starting the program execution, the user either enters the name of the file containing previously entered data or initializes a new data file.
DATA	Enables user to enter raw data. When the system requests values of time, volume, temperature, pressure and vapor pressure, the user enters the appropriate data. After completing the data entry, a summary is printed out. The user then verifies that the data were entered correctly. If errors are detected, the user will then be given the opportunity to correct the errors. After the user verifies that the data were entered correctly, a Corrected Data Summary Report of time, data, average temperature, partial pressure of dry air, and water vapor pressure is printed.
TREND	A Trend Report is printed.
TOTAL	A Total Time Report is printed.
MASS	A Mass Point Report is printed.
TERM	Enables user to sign-off temporarily or permanently. All data is saved on a file for restarting.
CORR	Enables user to correct previously entered data.
LIST	A Summary Data Report is printed.
READ	Enable the computer to receive the next set of data from the data acquisition system directly.
PLOT	Enables user to plot summary data, individual sensor data or air mass versus time.
DELETE	Enables user to delete a data point.
INSERT	Enables user to reinstate a previously deleted data point.
VOLFRA	Enable user to change volume fractions.

OPTION
COMMAND

FUNCTION

PRED	A predictor report is printed.
TIME	Enable the user to specify the time interval for a report or plot.
VERF	Enable the user to input imposed leakage rate and calculated ILRT leakage rates at start of verification test.

E. Computer Report and Data Printout

MASS POINT REPORT

The Mass Point Report presents leakage rate data (wt%/day) as determined by the Mass Point Method. The "Calculated Leakage Rate" is the value determined from the regression analysis. The "Containment Air Mass" values are the masses of dry air in the containment (lbm). These air masses, determined from the Equation of State, are used in the regression analysis.

TOTAL TIME REPORT

The Total Time Report presents data leakage rate (wt%/day) as determined by the Total Time Method. The "Calculated Leakage Rate" is the value determined from the regression analysis. The "Measured Leakage Rates" are the leakage rate values determined using Total Time calculations. These values of leakage rate are used in the regression analysis.

TREND REPORT

The Trend Report presents leakage rates as determined by the Mass Point and Total Time methods in percent of the initial contained mass of dry air per day (wt%/day), versus elapsed time (hours) and number of data points.

PREDICTOR REPORT

The predictor reports presents a predicted upper bound on the change in calculated mass point leakage rate over the next four hours.

SUMMARY DATA REPORT

The Summary Data report presents the actual data used to calculate leakage rates by the various methods described in the Computer Program" section of this report. The seven columns are TIME, DATE, TEMP, PRESSURE, VPRS, VOLUME, and AIRMASS and contain data defined as follows:

1. TIME: Time in 24-hour notation (hours and minutes).
2. DATE: Calendar date (month and day).
3. TEMP: Containment weighted-average drybulb temperature in absolute units, degrees Rankine ('R).
4. PRESSURE: Partial pressure of the dry air component of the containment atmosphere in absolute units (psia).
5. VPRS: Partial pressure of water vapor of the containment atmosphere in absolute units (psia).
6. VOLUME: Containment free air volume (cu. ft.).
7. AIRMASS: Calculated dry air mass (lbm).

F. Summary of Measured Data and Summary of Corrected Data

The Summary of Measured Data presents the individual containment atmosphere drybulb temperatures, dewpoint temperatures, absolute total pressure and free air volume measured at the time and date.

1. TEMP 1 through TEMP N are the drybulb temperatures, where N = No. of RTD's. The values in the right-hand column are temperatures ('F), multiplied by 100, as read from the data acquisition system (DAS). The values in the left-hand column are the corrected temperatures expressed in absolute units ('R).
2. PRES 1 through PRES N are the total pressures, absolute, where N = No. of pressure sensors. The right-hand value, in parentheses, is a number of counts as read from the DAS. This count value is converted to a value in psia by the computer via the instrument's calibration table, counts versus psia. The left-hand column is the absolute total pressure, psia.
3. VPRS 1 through VPRS N are the dewpoint temperatures (water vapor pressures), where N = No. of dewpoint sensors. The values in the right-hand column are temperatures ('F), multiplied by 100 as read from the DAS. The values in the left-hand column are the water vapor pressures (psia) from the steam tables for saturated steam corresponding to the dewpoint (saturation) temperatures in the center column.

The Summary of Corrected Data presented corrected temperature and pressure values and calculated air mass determined as follows:

1. TEMPERATURE ('R) is the volume weighted average containment atmosphere drybulb temperature derived from TEMP 1 through TEMP N.

2. CORRECTED PRESSURE (psia) is the partial pressure of the dry air component of the containment atmosphere, absolute. The volume weighted average containment atmosphere water vapor pressure is subtracted from the volume weighted average total pressure, yielding the partial pressure of the dry air.
3. VAPOR PRESSURE (psia) is the volume weighted average containment atmosphere water vapor pressure, absolute, derived from VPRS 1 through VPRS N.
4. VOLUME (cu. ft.) is the containment free air volume.
5. CONTAINMENT AIR MASS (lbm) is the calculated mass of dry air in the containment. The mass of dry air is calculated using the containment free air volume and the above TEMPERATURE and CORRECTED PRESSURE of the dry air.

APPENDIX B

ILRT Stabilization

CALVERT CLIFFS - UNIT 2 JANUARY 1951 ILRT
TEMPERATURE STABILIZATION

FROM A STARTING TIME AND DATE OF: 645 115 1991

TIME (HOURS)	TEMP (°R)	AVE ΔT (4HRS)	ANSI AVE ΔT (1HR)	DIFF	BN-TOP-1 AVE ΔT (2HRS)	IS-021-5 AVE ΔT (2HRS)
.00	522.935					
.25	522.997					
.50	523.057					
.75	523.053					
1.00	523.142					
1.25	523.203					
1.50	523.274					
1.75	523.378					
2.00	523.457				.261*	.0
2.25	523.543				.273*	.05
2.50	523.620				.281*	.18
2.75	523.719				.333*	.023
3.00	523.859				.359*	.181
3.25	524.765				.781*	1.908
3.50	524.709				.717*	-.367
3.75	524.687				.654*	-.230
4.00	524.688	.438	.829	-.391*	.615*	-.193
4.25	524.699	.425	-.066	.491*	.578*	-.151
4.50	524.709	.413	.001	.412*	.545*	-.202
4.75	524.794	.435	.107	.328*	.538*	-.127
5.00	524.849	.427	.161	.266*	.495*	-1.944
5.25	524.941	.434	.242	.193*	.088*	.337*
5.50	525.021	.437	.312	.125*	.156*	.233*
5.75	525.067	.422	.273	.149*	.190*	.103*
6.00	525.107	.412	.257	.155*	.209*	.066*
6.25	525.163	.405	.223	.182*	.233*	.106*
6.50	525.228	.402	.207	.195*	.260*	-.045*
6.75	525.238	.380	.171	.209*	.222*	-.104*
7.00	525.284	.356	.178	.178*	.218*	-.103*

* INDICATES TEMPERATURE STABILIZATION HAS BEEN SATISFIED

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
SUMMARY DATA

ALMAX = .200
VRATET = .235

VOLUME = 2000000.
VRATEM = .254

TIME	DATE	TEMP	PRESSURE	VPRS	VOLUME	AIRMASS
645	115	522.935	65.0676	.2047	2000000.0	671700.1
700	115	522.997	65.0594	.2068	2000000.0	671535.8
715	115	523.057	65.0564	.2091	2000000.0	671427.3
730	115	523.053	65.0614	.2086	2000000.0	671483.8
745	115	523.142	65.0699	.2084	2000000.0	671457.8
800	115	523.203	65.0804	.2085	2000000.0	671488.0
815	115	523.274	65.0926	.2088	2000000.0	671522.5
830	115	523.378	65.1028	.2092	2000000.0	671493.6
845	115	523.457	65.1143	.2091	2000000.0	671510.4
900	115	523.543	65.1253	.2091	2000000.0	671514.3
915	115	523.620	65.1360	.2093	2000000.0	671526.1
930	115	523.719	65.1446	.2095	2000000.0	671488.7
945	115	523.859	65.1522	.2103	2000000.0	671386.4
1000	115	524.765	65.0713	.2917	2000000.0	669395.4
1015	115	524.709	65.0722	.2902	2000000.0	669476.9
1030	115	524.687	65.0708	.2890	2000000.0	669489.5
1045	115	524.688	65.0718	.2880	2000000.0	669497.8
1100	115	524.699	65.0731	.2874	2000000.0	669498.0
1115	115	524.709	65.0743	.2871	2000000.0	669497.8
1130	115	524.794	65.1568	.2079	2000000.0	670237.4
1145	115	524.849	65.1659	.2099	2000000.0	670260.4
1200	115	524.941	65.1745	.2106	2000000.0	670232.6
1215	115	525.021	65.1816	.2109	2000000.0	670202.7
1230	115	525.067	65.1885	.2112	2000000.0	670214.
1245	115	525.107	65.1944	.2114	2000000.0	670225.
1300	115	525.163	65.1998	.2116	2000000.0	670208.
1315	115	525.228	65.2016	.2116	2000000.0	670143.
1330	115	525.238	65.1983	.2119	2000000.0	670097.6
1345	115	525.184	65.2033	.2121	2000000.0	670089.8

APPENDIX C

ILRT Calculations

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
LEAKAGE RATE (WEIGHT PERCENT/DAY)
TOTAL TIME ANALYSIS

TIME AND DATE AT START OF TEST: 1400 115 1991
TEST DURATION: 9.00 HOURS

TIME	TEMP (R)	PRESSURE (PSIA)	MEASURED LEAKAGE RATE
1400	525.320	65.2081	
1415	525.375	65.2129	.291
1430	525.418	65.2172	.222
1445	525.445	65.2215	.101
1500	525.481	65.2249	.115
1515	525.518	65.2290	.105
1530	525.566	65.2331	.132
1545	525.603	65.2374	.120
1600	525.632	65.2412	.101
1615	525.664	65.2443	.104
1630	525.664	65.2473	.050
1645	525.701	65.2507	.062
1700	525.751	65.2537	.096
1715	525.764	65.2566	.074
1730	525.792	65.2614	.054
1745	525.816	65.2641	.054
1800	525.849	65.2660	.071
1815	525.880	65.2693	.072
1830	525.906	65.2712	.079
1845	525.923	65.2749	.062
1900	525.944	65.2766	.065
1915	525.988	65.2795	.080
1930	525.995	65.2825	.062
1945	526.027	65.2848	.070
2000	526.023	65.2872	.050
2015	526.048	65.2898	.050
2030	526.088	65.2916	.066
2045	526.104	65.2932	.066
2100	526.123	65.2955	.064
2115	526.145	65.2972	.067
2130	526.180	65.2993	.075
2145	526.190	65.3016	.068
2200	526.208	65.3032	.069
2215	526.214	65.3046	.064
2230	526.227	65.3065	.061
2245	526.240	65.3085	.058
2300	526.237	65.3102	.048

MEAN OF THE MEASURED LEAKAGE RATES	=	.085
MAXIMUM ALLOWABLE LEAKAGE RATE	=	.200
75% OF MAXIMUM ALLOWABLE LEAKAGE RATE	=	.150
THE UPPER 95% CONFIDENCE LIMIT	=	.117
THE CALCULATED LEAKAGE RATE	=	.035

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
LEAKAGE RATE (WEIGHT PERCENT/DAY)
MASS POINT ANALYSIS

TIME AND DATE AT START OF TEST: 1400 115 1991
TEST DURATION: 9.00 HOURS

TIME	TEMP (R)	PRESSURE (PSIA)	CTMT. AIR MASS (LBM)	MASS LOSS (LBM)	AVERAGE MASS LOSS (LBM/HR)
1400	525.320	65.2081	670093.1		
1415	525.375	65.2129	670072.8	20.3	81.1
1430	525.418	65.2172	670062.1	10.7	62.1
1445	525.445	65.2215	670072.1	-10.0	28.1
1500	525.481	65.2249	670061.1	11.0	32.0
1515	525.518	65.2290	670056.4	4.7	29.4
1530	525.566	65.2331	670037.6	18.8	37.0
1545	525.603	65.2374	670034.6	3.0	33.4
1600	525.632	65.2412	670036.5	-1.9	28.3
1615	525.664	65.2443	670027.6	8.9	29.1
1630	525.664	65.2473	670058.4	-30.7	13.9
1645	525.701	65.2507	670045.8	12.6	17.2
1700	525.751	65.2537	670012.9	32.8	26.7
1715	525.764	65.2566	670026.4	-13.5	20.5
1730	525.792	65.2614	670040.4	-14.0	15.1
1745	525.816	65.2641	670036.4	4.0	15.1
1800	525.849	65.2660	670014.3	22.1	19.7
1815	525.880	65.2693	670007.8	6.5	20.1
1830	525.906	65.2712	669994.4	13.5	21.9
1845	525.923	65.2749	670011.3	-16.9	17.2
1900	525.944	65.2766	670002.2	9.1	18.2
1915	525.988	65.2795	669975.9	26.3	22.3
1930	525.995	65.2825	669997.5	-21.6	17.4
1945	526.027	65.2848	669980.4	17.1	19.6
2000	526.023	65.2872	670010.0	-29.6	13.9
2015	526.048	65.2898	670006.0	4.0	13.9
2030	526.088	65.2916	669972.9	33.1	18.5
2045	526.104	65.2932	669968.7	4.2	18.4
2100	526.123	65.2955	669967.7	1.0	17.9
2115	526.145	65.2972	669957.0	10.7	18.8
2130	526.180	65.2993	669935.3	21.7	21.0
2145	526.190	65.3016	669945.2	-9.9	19.1
2200	526.208	65.3032	669939.0	6.2	19.3
2215	526.214	65.3046	669944.6	-5.6	18.0
2230	526.227	65.3065	669949.1	-4.5	16.9
2245	526.240	65.3085	669952.2	-3.0	16.1
2300	526.237	65.3102	669973.1	-20.9	13.3

FREE AIR VOLUME USED (CU. FT.)	=2000000.0
REGRESSION LINE	
INTERCEPT (LBM)	= 670075.8
SLOPE (LBM/HR)	= -15.1
MAXIMUM ALLOWABLE LEAKAGE RATE	= .200
75% OF MAXIMUM ALLOWABLE LEAKAGE RATE	= .150
THE UPPER 95% CONFIDENCE LIMIT	= .060
THE CALCULATED LEAKAGE RATE	= .054

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
TREND REPORT

TIME AND DATE AT START OF TEST: 1400 115 1991

NO. PTS	END TIME	TOTAL TIME ANALYSIS			MASS POINT ANALYSIS	
		MEAS.	CALCULATED	UCL	CALCULATED	UCL
2	1415	.291	.291	99.000	.291	99.000
3	1430	.222	.222	99.000	.222	.560
4	1445	.101	.109	.320	.106	.310
5	1500	.115	.085	.294	.093	.189
6	1515	.105	.071	.250	.085	.143
7	1530	.132	.080	.266	.102	.146
8	1545	.120	.081	.249	.105	.136
9	1600	.101	.075	.225	.097	.122
10	1615	.104	.073	.212	.095	.114
11	1630	.050	.054	.179	.069	.100
12	1645	.062	.044	.160	.059	.087
13	1700	.096	.048	.164	.066	.090
14	1715	.074	.044	.157	.063	.084
15	1730	.054	.037	.144	.055	.075
16	1745	.054	.032	.135	.049	.067
17	1800	.071	.032	.133	.050	.067
18	1815	.072	.033	.133	.052	.067
19	1830	.079	.035	.135	.056	.069
20	1845	.062	.033	.131	.054	.066
21	1900	.065	.033	.129	.054	.064
22	1915	.080	.035	.132	.057	.068
23	1930	.062	.034	.129	.056	.066
24	1945	.070	.035	.129	.057	.066
25	2000	.050	.033	.124	.053	.062
26	2015	.050	.031	.120	.050	.059
27	2030	.066	.031	.120	.051	.059
28	2045	.066	.032	.120	.052	.060
29	2100	.064	.032	.120	.053	.060
30	2115	.067	.033	.120	.054	.061
31	2130	.075	.035	.122	.056	.063
32	2145	.068	.036	.122	.057	.063
33	2200	.069	.037	.122	.058	.064
34	2215	.064	.037	.122	.058	.064
35	2230	.061	.037	.121	.057	.063
36	2245	.058	.036	.119	.057	.062
37	2300	.048	.035	.117	.054	.060

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
SUMMARY DATA

ALMAX = .200
VRATET = .235

VOLUME = 2000000.
VRATEM = .254

TIME	DATE	TEMP	PRESSURE	VPRS	VOLUME	AIRMASS
1400	115	525.320	65.2081	.2123	2000000.0	670093.1
1415	115	525.375	65.2129	.2124	2000000.0	670072.8
1430	115	525.418	65.2172	.2127	2000000.0	670062.1
1445	115	525.445	65.2215	.2129	2000000.0	670072.1
1500	115	525.481	65.2249	.2131	2000000.0	670061.1
1515	115	525.518	65.2290	.2132	2000000.0	670056.4
1530	115	525.566	65.2331	.2133	2000000.0	670037.6
1545	115	525.603	65.2374	.2134	2000000.0	670034.6
1600	115	525.632	65.2412	.2135	2000000.0	670036.5
1615	115	525.664	65.2443	.2139	2000000.0	670027.6
1630	115	525.664	65.2473	.2141	2000000.0	670058.4
1645	115	525.701	65.2507	.2142	2000000.0	670045.8
1700	115	525.751	65.2537	.2143	2000000.0	670012.9
1715	115	525.764	65.2566	.2147	2000000.0	670026.4
1730	115	525.792	65.2614	.2147	2000000.0	670040.4
1745	115	525.816	65.2641	.2148	2000000.0	670036.4
1800	115	525.849	65.2660	.2150	2000000.0	670014.3
1815	115	525.880	65.2693	.2150	2000000.0	670007.8
1830	115	525.906	65.2712	.2153	2000000.0	669994.4
1845	115	525.923	65.2749	.2155	2000000.0	670011.3
1900	115	525.944	65.2766	.2155	2000000.0	670002.2
1915	115	525.988	65.2795	.2158	2000000.0	669975.9
1930	115	525.995	65.2825	.2158	2000000.0	669997.5
1945	115	526.027	65.2848	.2162	2000000.0	669980.4
2000	115	526.023	65.2872	.2161	2000000.0	670010.0
2015	115	526.048	65.2898	.2163	2000000.0	670006.0
2030	115	526.088	65.2916	.2165	2000000.0	669972.9
2045	115	526.104	65.2932	.2170	2000000.0	669968.7
2100	115	526.123	65.2955	.2166	2000000.0	669967.7
2115	115	526.145	65.2972	.2171	2000000.0	669957.0
2130	115	526.180	65.2993	.2169	2000000.0	669935.3
2145	115	526.190	65.3016	.2174	2000000.0	669945.2
2200	115	526.208	65.3032	.2173	2000000.0	669939.0
2215	115	526.214	65.3046	.2176	2000000.0	669944.6
2230	115	526.227	65.3065	.2176	2000000.0	669949.1
2245	115	526.240	65.3085	.2178	2000000.0	669952.2
2300	115	526.237	65.3102	.2179	2000000.0	669973.1

ISG CALCULATION
(ANSI/ANS 56.8)

CALIBRATION DATA

	# OF SENSORS	SENSOR SENSITIVITY(E)	DISPLAY REPEATABILITY(r)
TEMPERATURE(T)	17	0.010 deg. F	0.010 deg. F
PRESSURE(P)	2	0.001 psia	0.001 psia
VAPOR PRESS(Pv)	6	0.100 deg. F	0.010 deg. F

LENGTH OF TEST(t) 9.00 hrs

PRESSURE(P) 65.28 psia

TEMPERATURE(T) 526.0 deg. R

VAPOR PRESS(Pv) 0.00779 psi/deg. F (at 55 deg. F)

La 0.200 wt%/day

INSTRUMENT MEASUREMENT ERRORS

$$eT = \left[(ET)^2 + (rT)^2 \right]^{1/2} / [\# \text{ of sensors}]^{1/2}$$

eT = 0.00343 deg. F

$$eP = \left[(EP)^2 + (rP)^2 \right]^{1/2} / [\# \text{ of sensors}]^{1/2}$$

eP = 0.00100 psia

$$ePv = \left[(EPv)^2 + (rPv)^2 \right]^{1/2} / [\# \text{ of sensors}]^{1/2}$$

ePv = 0.00032 psia

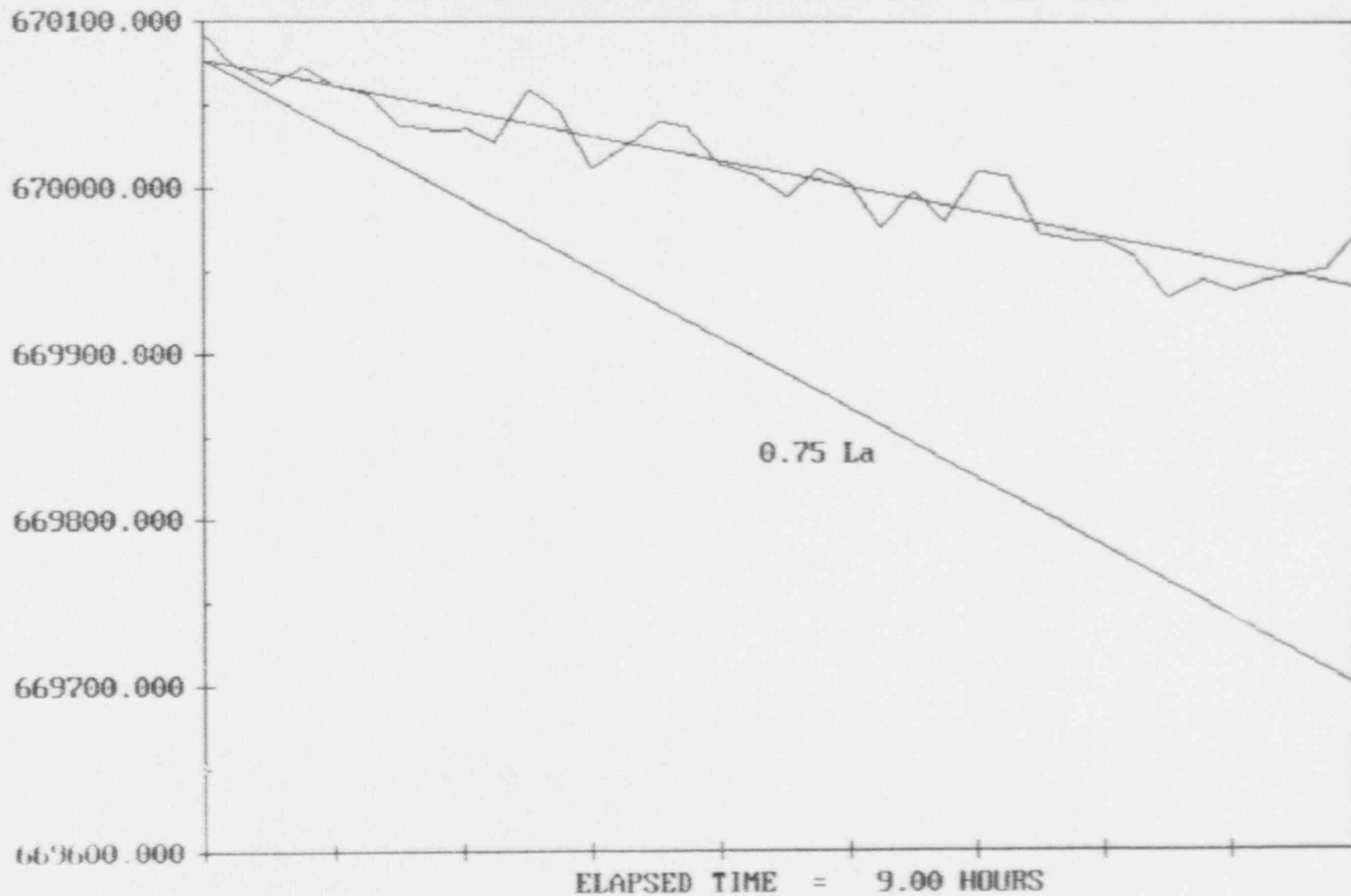
INSTRUMENT SELECTION GUIDE

$$ISG = 2400/t \left[2(eP/P)^2 + 2(ePv/P)^2 + 2(eT/T)^2 \right]^{1/2}$$

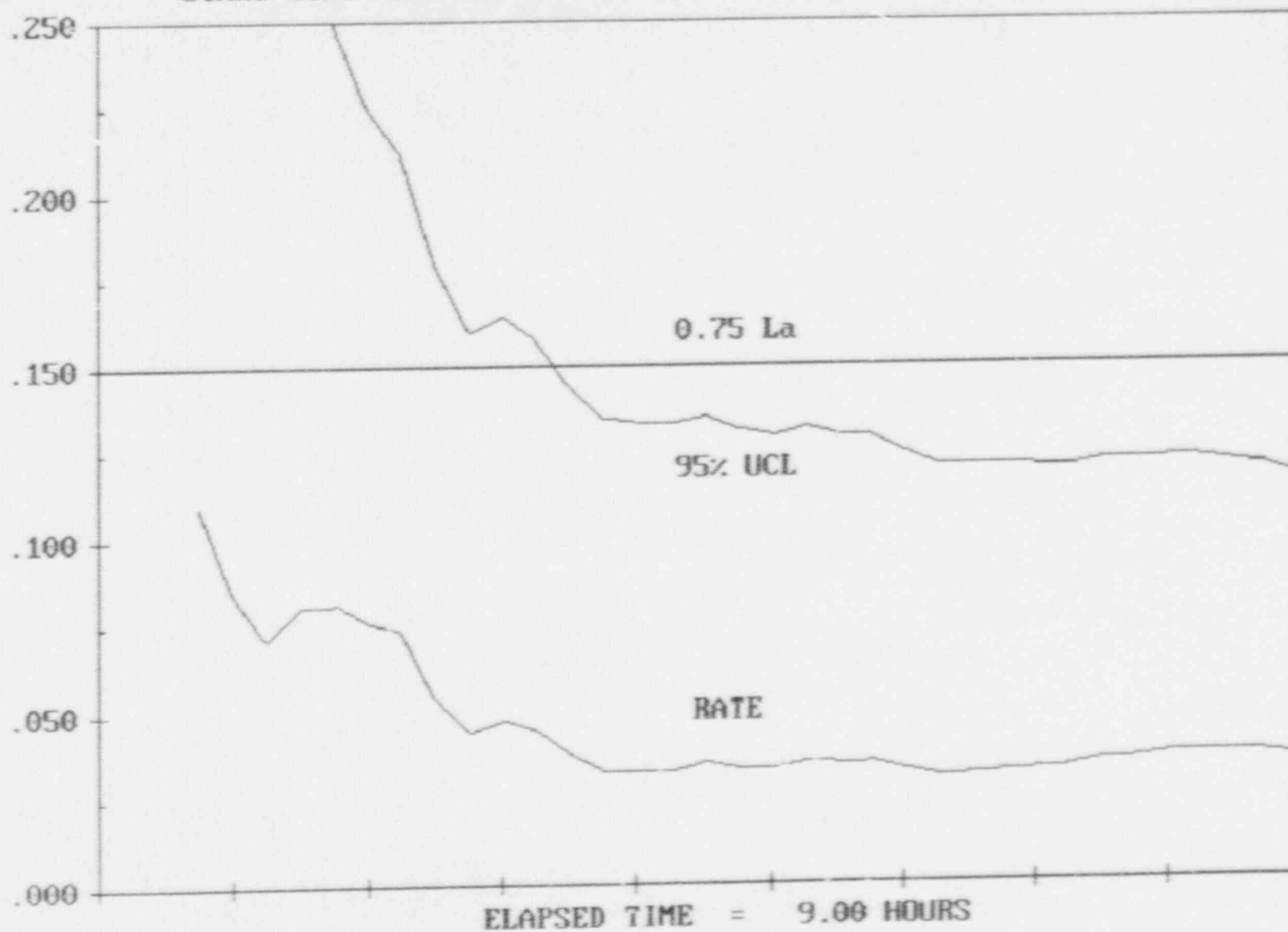
ISG = 0.007 wt%/day

.25La = 0.050 wt%/day

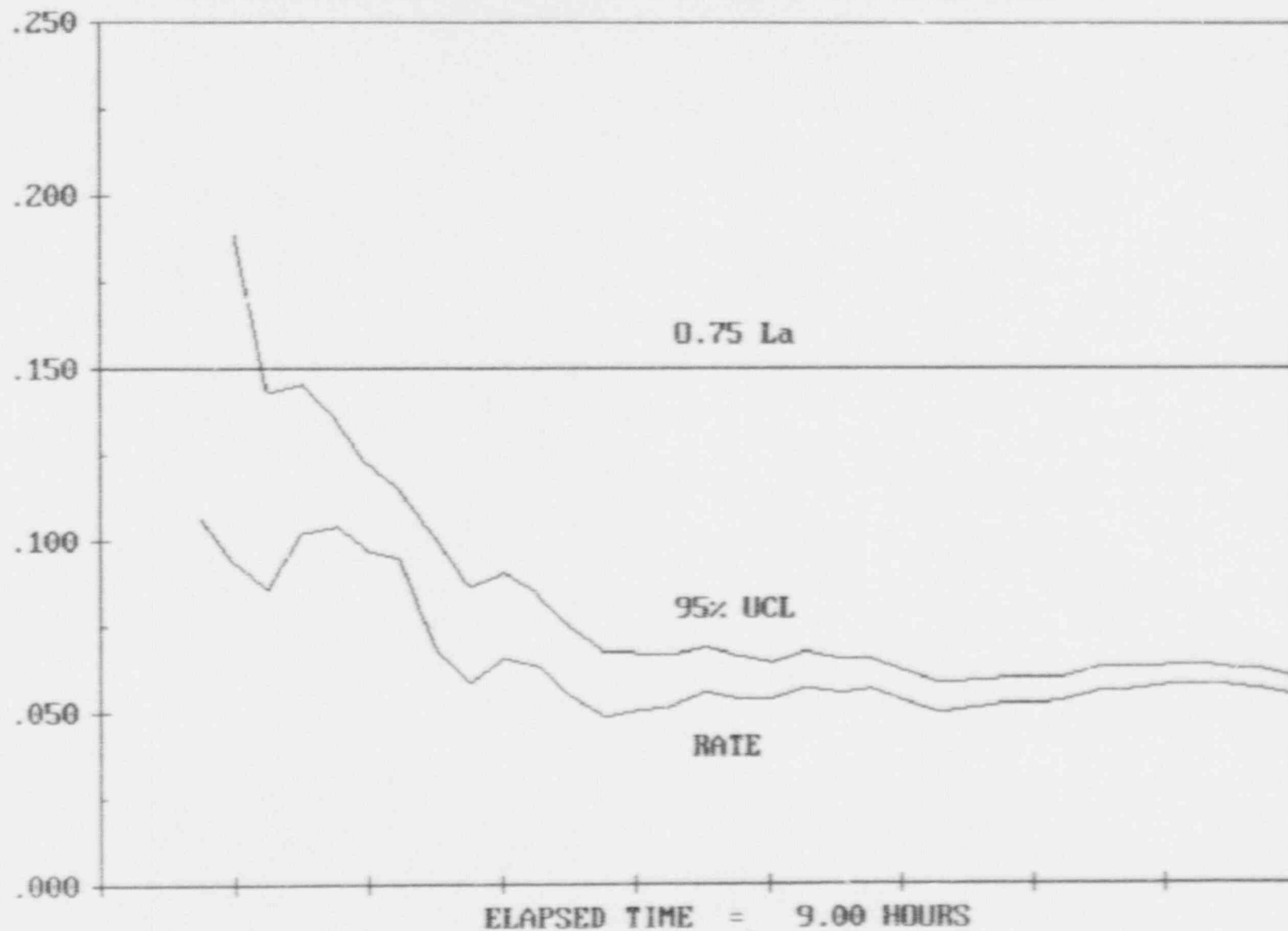
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
AIRMASS LBM, REGRESSION LINE AND 0.75 La SLOPE
START TIME 1400 DATE 115 END TIME 2300 DATE 115



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
TOTAL TIME LEAKAGE RATE, UCL AND 0.75 La - %/DAY
START TIME 1400 DATE 115 END TIME 2300 DATE 115



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
MASS POINT LEAKAGE RATE, UCL AND 0.75 La - %/DAY
START TIME 1400 DATE 115 END TIME 2300 DATE 115



APPENDIX D

Verification Flow Test

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
LEAKAGE RATE (WEIGHT PERCENT/DAY)
TOTAL TIME ANALYSIS

TIME AND DATE AT START OF TEST: 15 116 1991
TEST DURATION: 4.50 HOURS

TIME	TEMP (R)	PRESSURE (PSIA)	MEASURED LEAKAGE RATE
15	526.352	65.3129	
30	526.386	65.3142	.442
45	526.387	65.3148	.185
100	526.421	65.3148	.332
115	526.401	65.3154	.134
130	526.441	65.3155	.249
145	526.466	65.3162	.266
200	526.492	65.3166	.288
215	526.509	65.3167	.291
230	526.522	65.3176	.269
245	526.522	65.3179	.239
300	526.542	65.3187	.238
315	526.559	65.3196	.233
330	526.574	65.3203	.228
345	526.599	65.3203	.245
400	526.629	65.3208	.260
415	526.638	65.3206	.255
430	526.676	65.3219	.270
445	526.685	65.3228	.258

MEAN OF THE MEASURED LEAKAGE RATES	=	.260
VERIFICATION TEST LEAKAGE RATE UPPER LIMIT	=	.285
VERIFICATION TEST LEAKAGE RATE LOWER LIMIT	=	.185
THE CALCULATED LEAKAGE RATE	=	.241

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
LEAKAGE RATE (WEIGHT PERCENT/DAY)
MASS POINT ANALYSIS

TIME AND DATE AT START OF TEST: 15 116 1991
TEST DURATION: 4.50 HOURS

TIME	TEMP (R)	PRESSURE (PSIA)	CTMT. AIR MASS (LBM)	MASS LOSS (LBM)	AVERAGE MASS LOSS (LBM/HR)
15	526.352	65.3129	669855.7		
30	526.386	65.3142	669824.9	30.8	123.3
45	526.387	65.3148	669829.8	-4.9	51.8
100	526.421	65.3148	669786.3	43.6	92.6
115	526.401	65.3154	669818.3	-32.0	37.4
130	526.441	65.3155	669769.0	49.3	69.4
145	526.466	65.3162	669744.4	24.6	74.2
200	526.492	65.3166	669715.1	29.3	80.3
215	526.509	65.3167	669693.1	22.0	81.3
230	526.522	65.3176	669687.0	6.1	75.0
245	526.522	65.3179	669689.0	-2.0	66.7
300	526.542	65.3187	669672.9	16.1	66.5
315	526.559	65.3196	669660.2	12.7	65.2
330	526.574	65.3203	669648.6	11.7	63.7
345	526.599	65.3203	669616.5	32.1	68.3
400	526.629	65.3208	669583.1	33.3	72.7
415	526.638	65.3206	669571.1	12.1	71.2
430	526.676	65.3219	669535.1	35.9	75.4
445	526.685	65.3228	669532.0	3.1	71.9

FREE AIR VOLUME USED (CU. FT.)	=2000000.0
REGRESSION LINE	
INTERCEPT (LBM)	= 669855.9
SLOPE (LBM/HR)	= -70.8
VERIFICATION TEST LEAKAGE RATE UPPER LIMIT	= .304
VERIFICATION TEST LEAKAGE RATE LOWER LIMIT	= .204
THE CALCULATED LEAKAGE RATE	= .254

CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
TREND REPORT

TIME AND DATE AT START OF TEST: 15 116 1991

NO. PTS	END TIME	TOTAL TIME ANALYSIS			MASS POINT ANALYSIS	
		MEAS.	CALCULATED	UCL	CALCULATED	UCL
1	30	.442	.442	99.000	.442	99.000
3	45	.185	.185	99.000	.185	1.451
4	100	.332	.265	1.856	.292	.557
5	115	.134	.157	.759	.163	.376
6	130	.249	.181	.629	.203	.340
7	145	.266	.204	.574	.234	.332
8	200	.288	.230	.551	.262	.339
9	215	.291	.247	.531	.279	.340
10	230	.269	.251	.503	.277	.325
11	245	.239	.243	.471	.262	.304
12	300	.238	.237	.446	.252	.288
13	315	.233	.232	.426	.244	.275
14	330	.228	.227	.408	.237	.264
15	345	.245	.227	.398	.237	.261
16	400	.260	.232	.395	.243	.265
17	415	.255	.234	.390	.246	.265
18	430	.270	.239	.390	.252	.270
19	445	.258	.241	.385	.254	.270

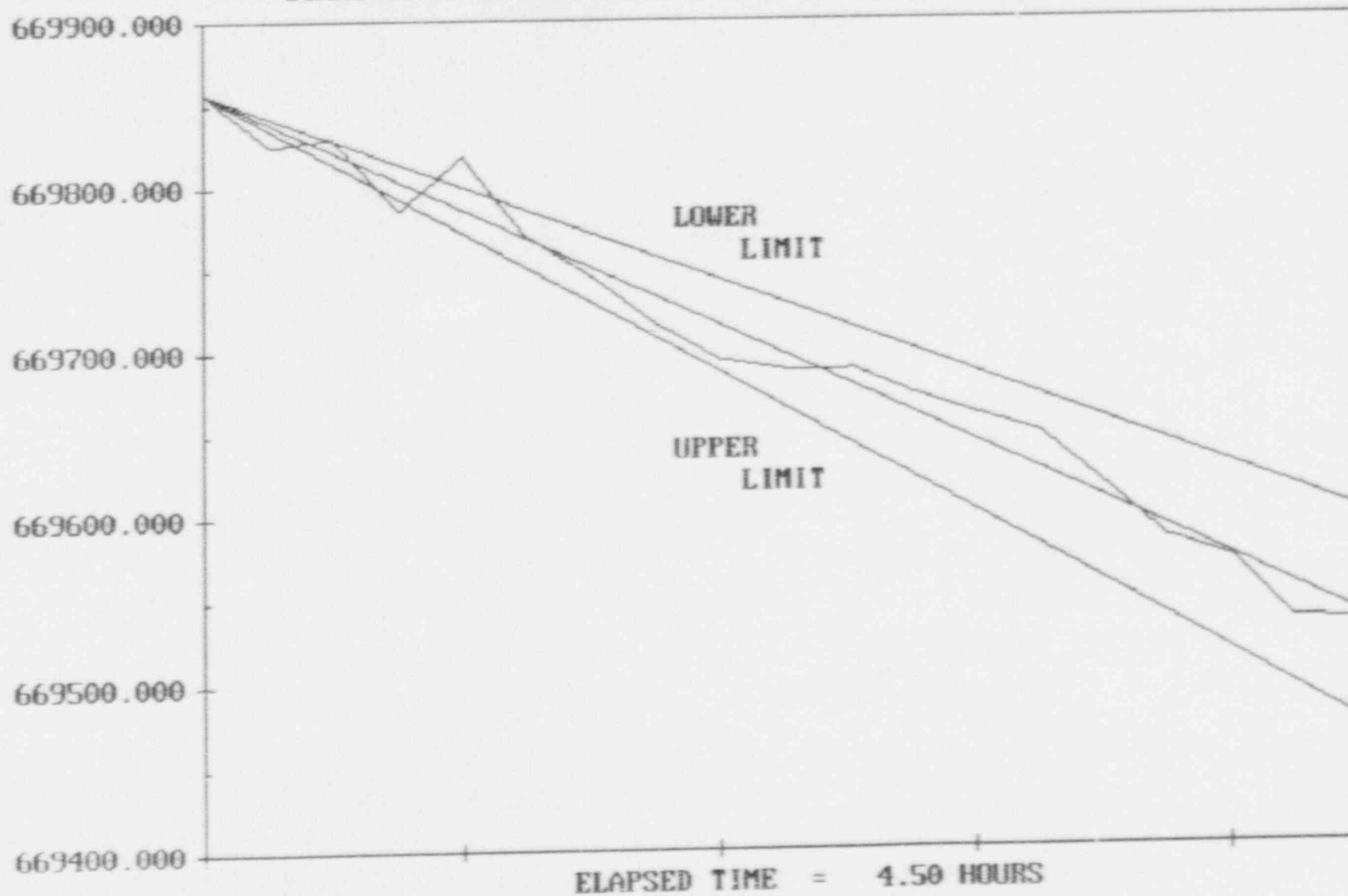
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
SUMMARY DATA

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VRATET = .235

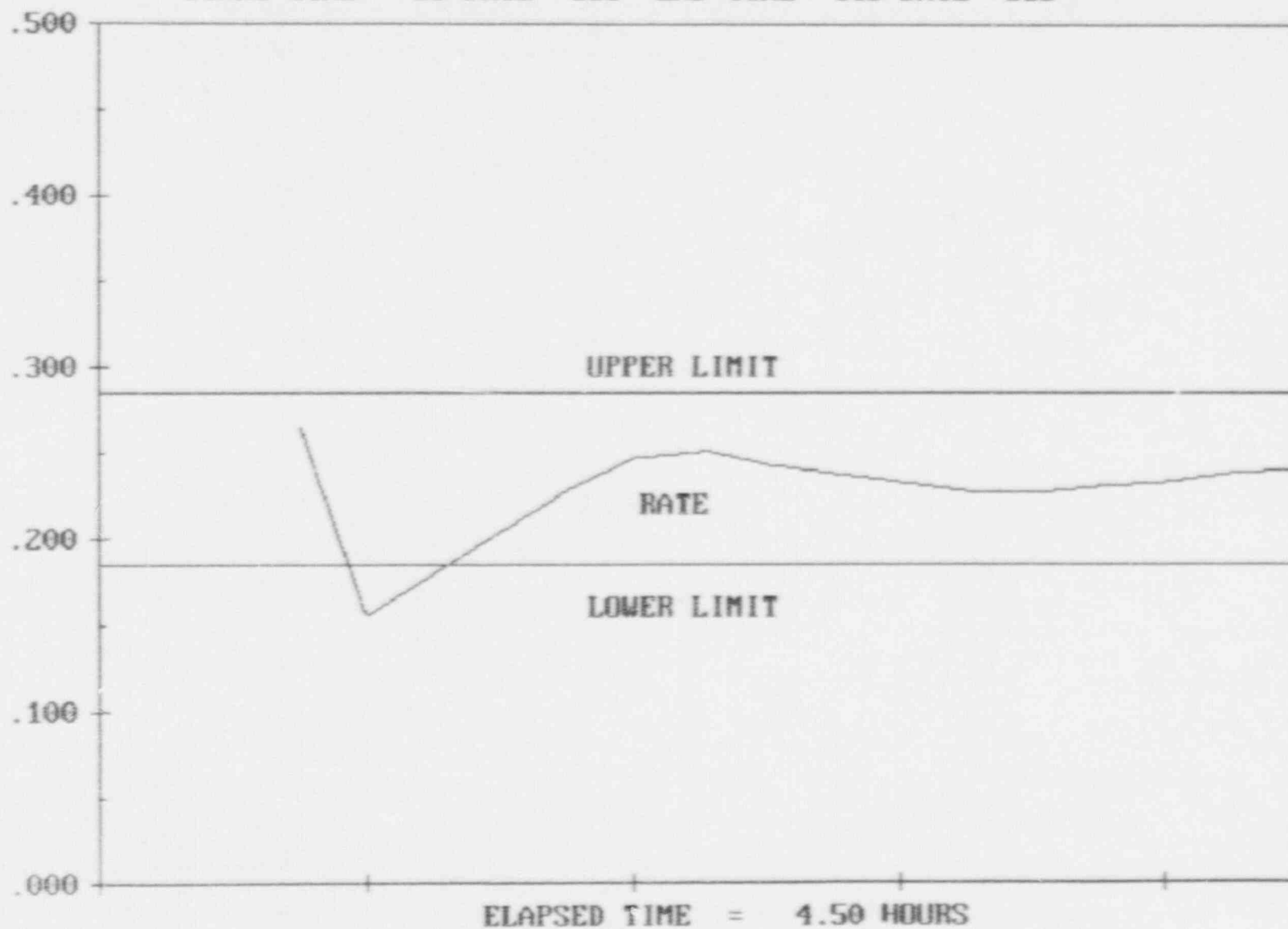
VOLUME = 2000000.
VRATEM = .254

TIME	DATE	TEMP	PRESSURE	VPRS	VOLUME	AIRMASS
2315	115	526.255	65.3121	.2182	2000000.0	669969.8
2330	115	526.279	65.3122	.2181	2000000.0	669940.7
2345	115	526.320	65.3122	.2181	2000000.0	669888.8
0	116	526.348	65.3123	.2183	2000000.0	669854.2
15	116	526.352	65.3129	.2184	2000000.0	669855.7
30	116	526.386	65.3142	.2186	2000000.0	669824.9
45	116	526.387	65.3148	.2187	2000000.0	669829.8
100	116	526.421	65.3148	.2187	2000000.0	669786.3
115	116	526.401	65.3154	.2191	2000000.0	669818.3
130	116	526.441	65.3155	.2190	2000000.0	669769.0
145	116	526.466	65.3162	.2190	2000000.0	669744.4
200	116	526.492	65.3166	.2194	2000000.0	669715.1
215	116	526.509	65.3167	.2193	2000000.0	669693.1
230	116	526.522	65.3176	.2196	2000000.0	669687.0
245	116	526.522	65.3179	.2193	2000000.0	669689.0
300	116	526.542	65.3187	.2197	2000000.0	669672.9
315	116	526.559	65.3196	.2198	2000000.0	669660.2
330	116	526.574	65.3203	.2201	2000000.0	669648.6
345	116	526.599	65.3203	.2201	2000000.0	669616.5
400	116	526.629	65.3208	.2201	2000000.0	669583.1
415	116	526.638	65.3206	.2202	2000000.0	669571.1
430	116	526.676	65.3219	.2205	2000000.0	669535.1
445	116	526.685	65.3228	.2206	2000000.0	669532.0

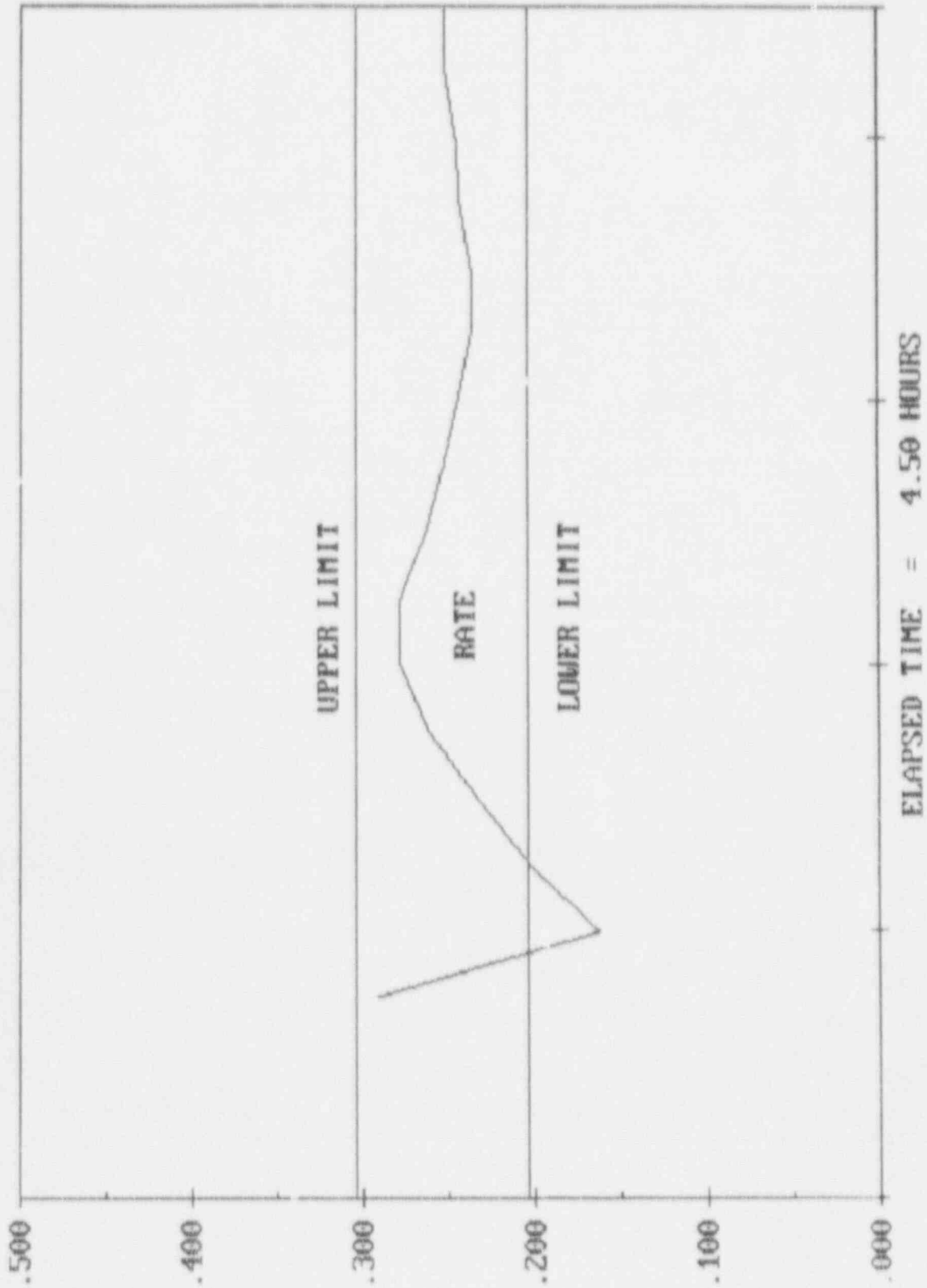
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
AIRMASS LBM, REGRESSION LINE AND VERIFICATION TEST LIMITS
START TIME 15 DATE 116 END TIME 445 DATE 116



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
TOTAL TIME LEAKAGE RATE AND VERIFICATION TEST LIMITS - %/DAY
START TIME 15 DATE 116 END TIME 445 DATE 116



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
MASS POINT LEAKAGE RATE AND VERIFICATION TEST LIMITS - %/DAY
START TIME 15 DATE 116 END TIME 445 DATE 116



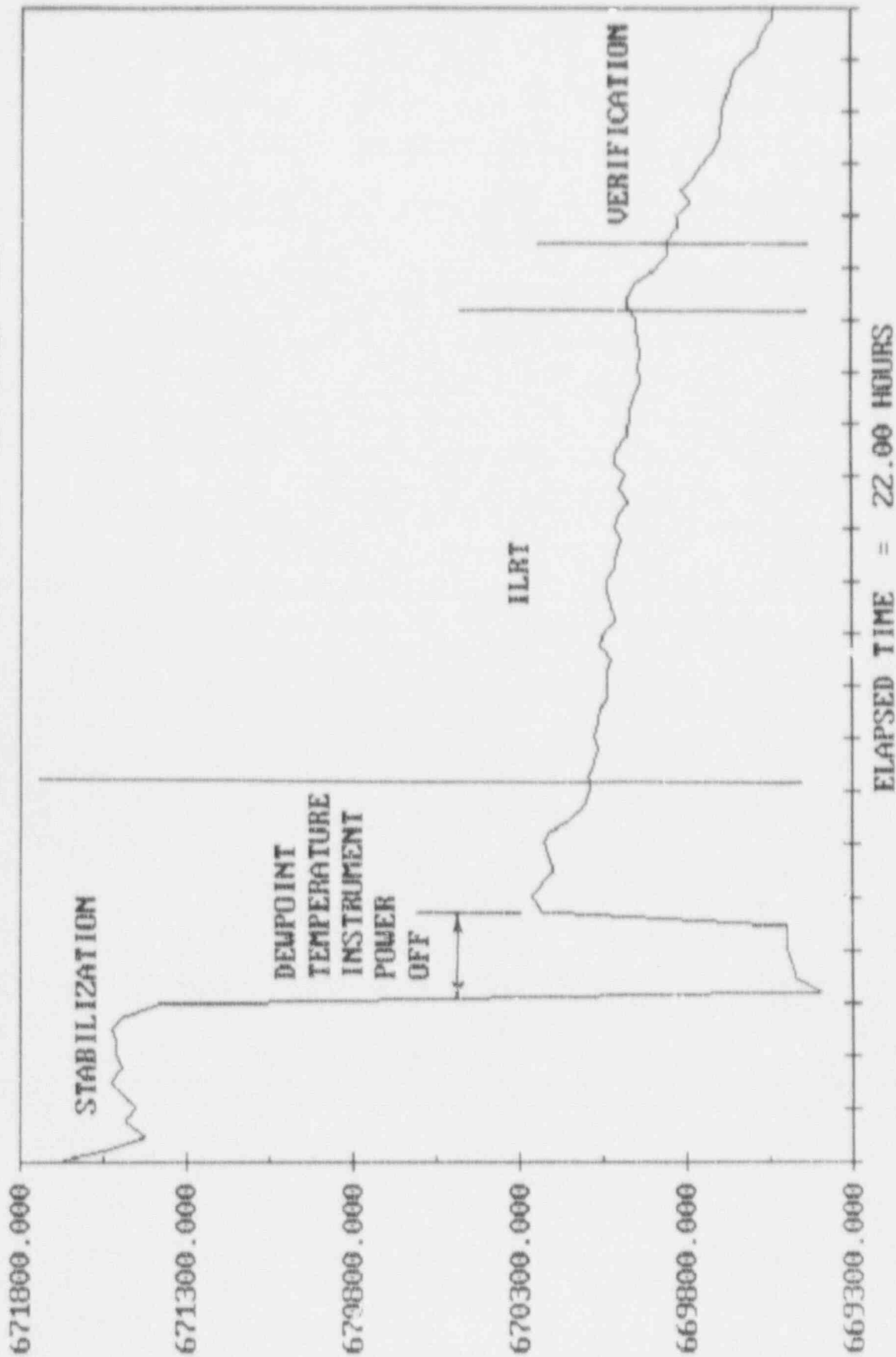
APPENDIX E

Data Graphs

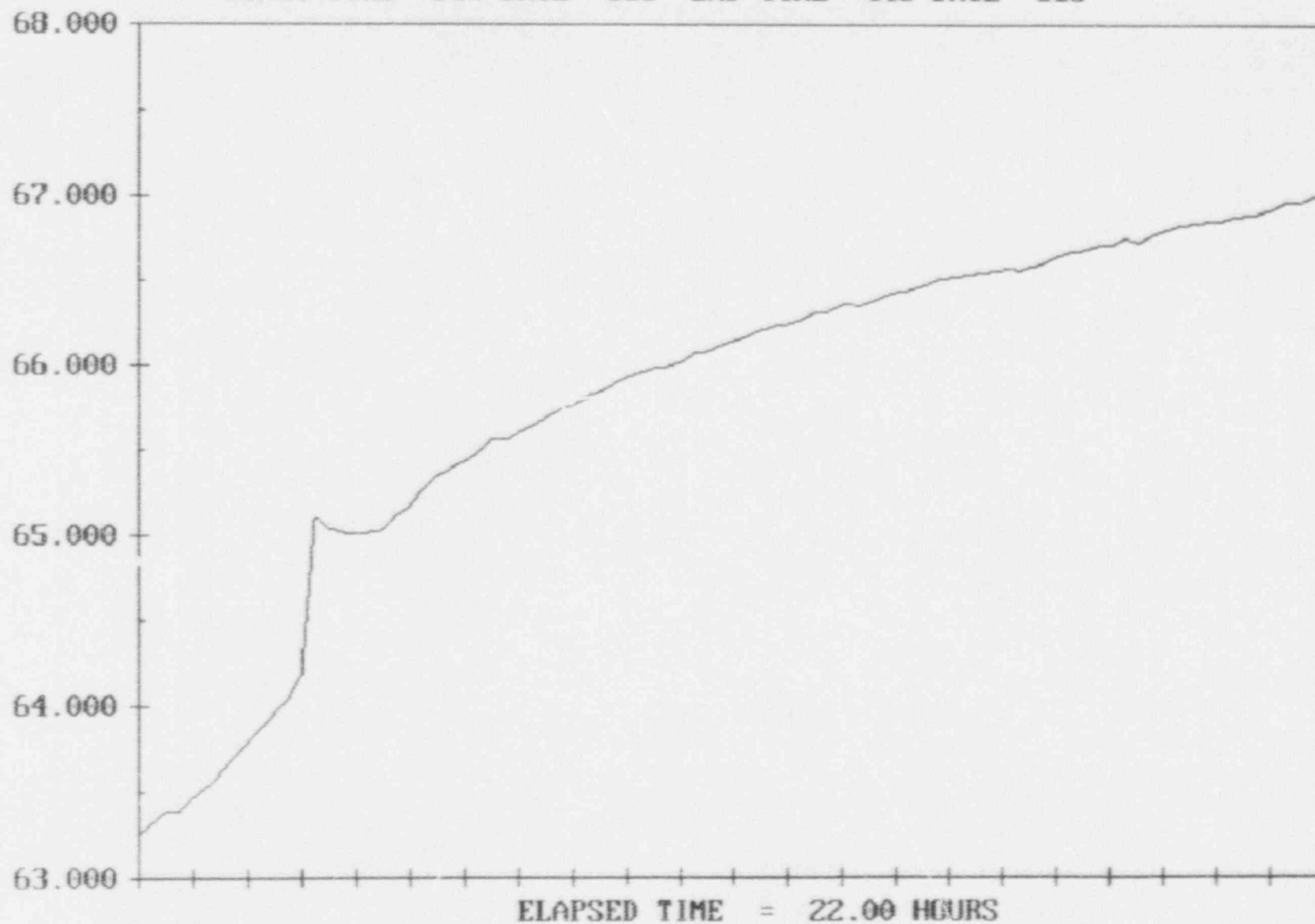
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT

AIRMASS LBM

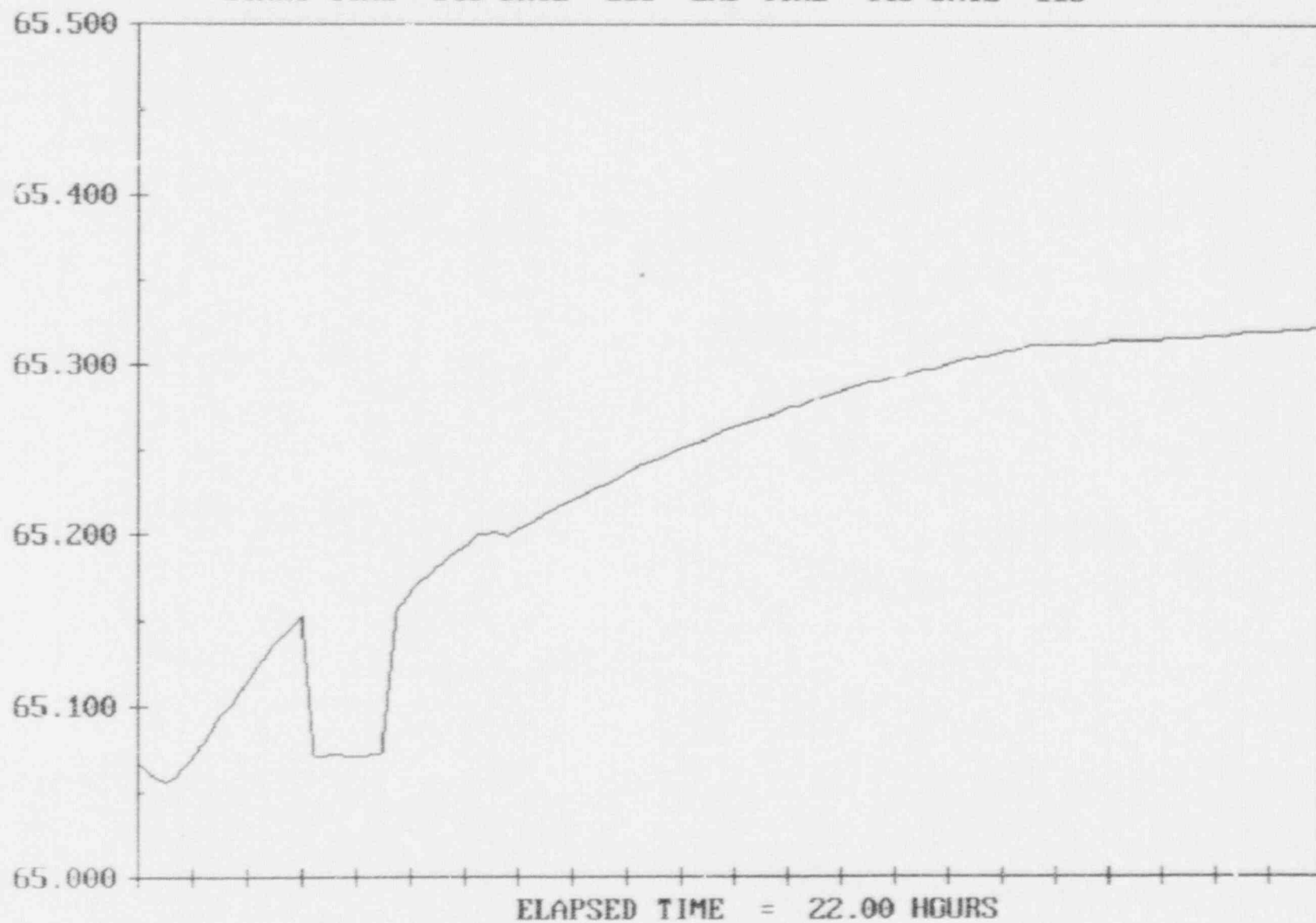
START TIME 645 DATE 115 END TIME 445 DATE 116



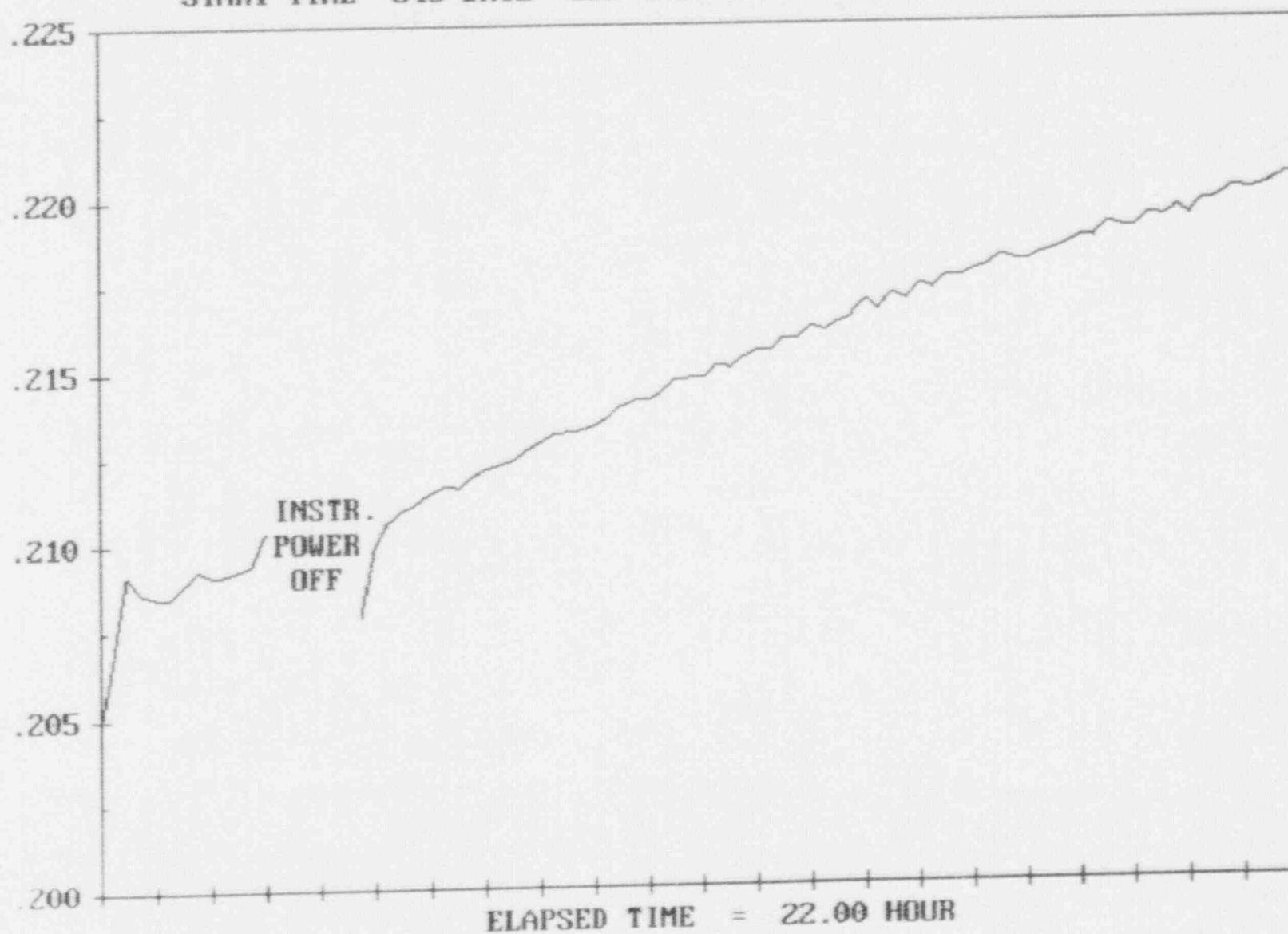
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
AVERAGE TEMPERATURE DEGREES F
START TIME 645 DATE 115 END TIME 445 DATE 116



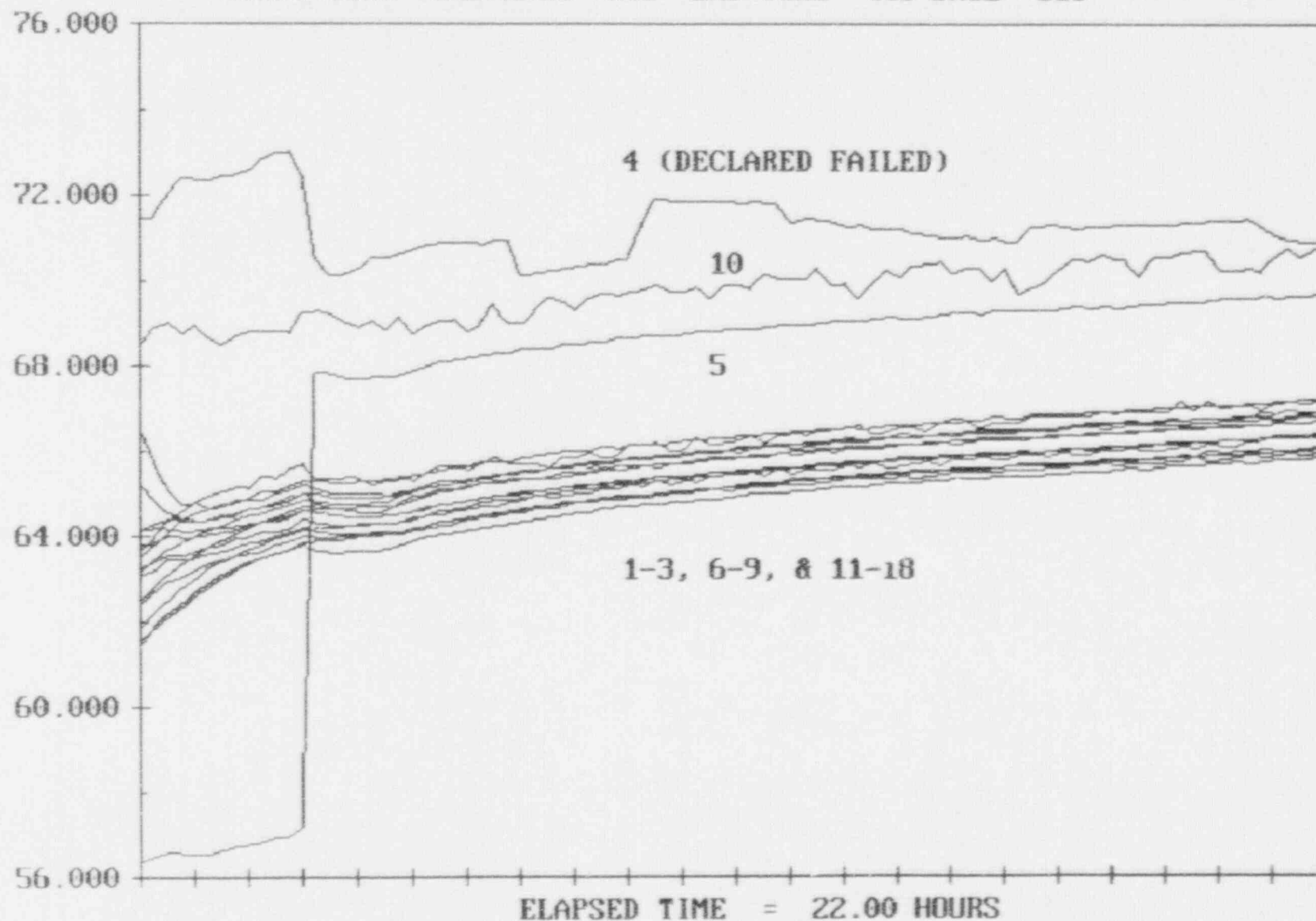
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
PRESSURE PSIA (DRY AIR)
START TIME 645 DATE 115 END TIME 445 DATE 116



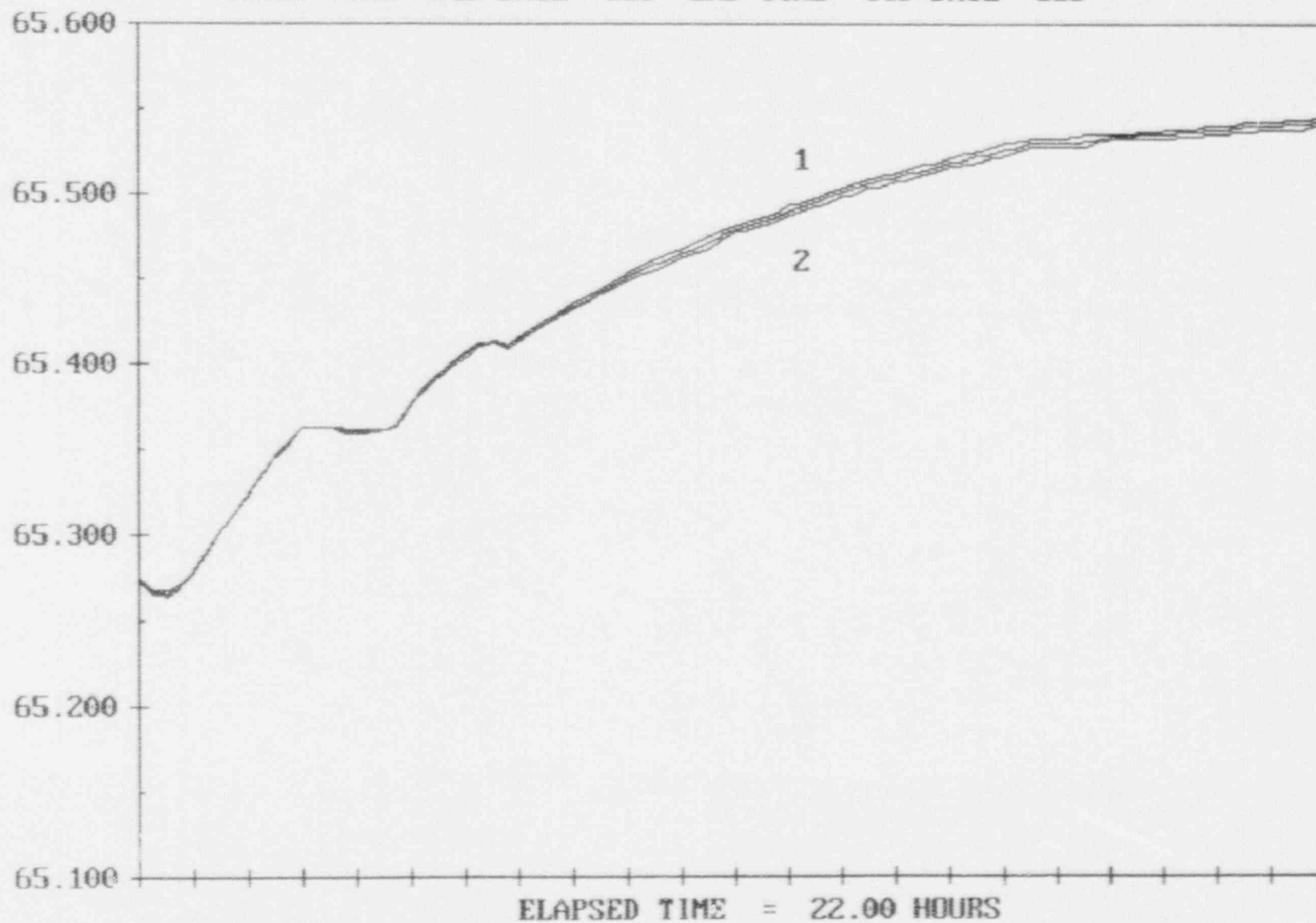
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
VAPOR PRESSURE PSIA
START TIME 645 DATE 115 END TIME 445 DATE 116



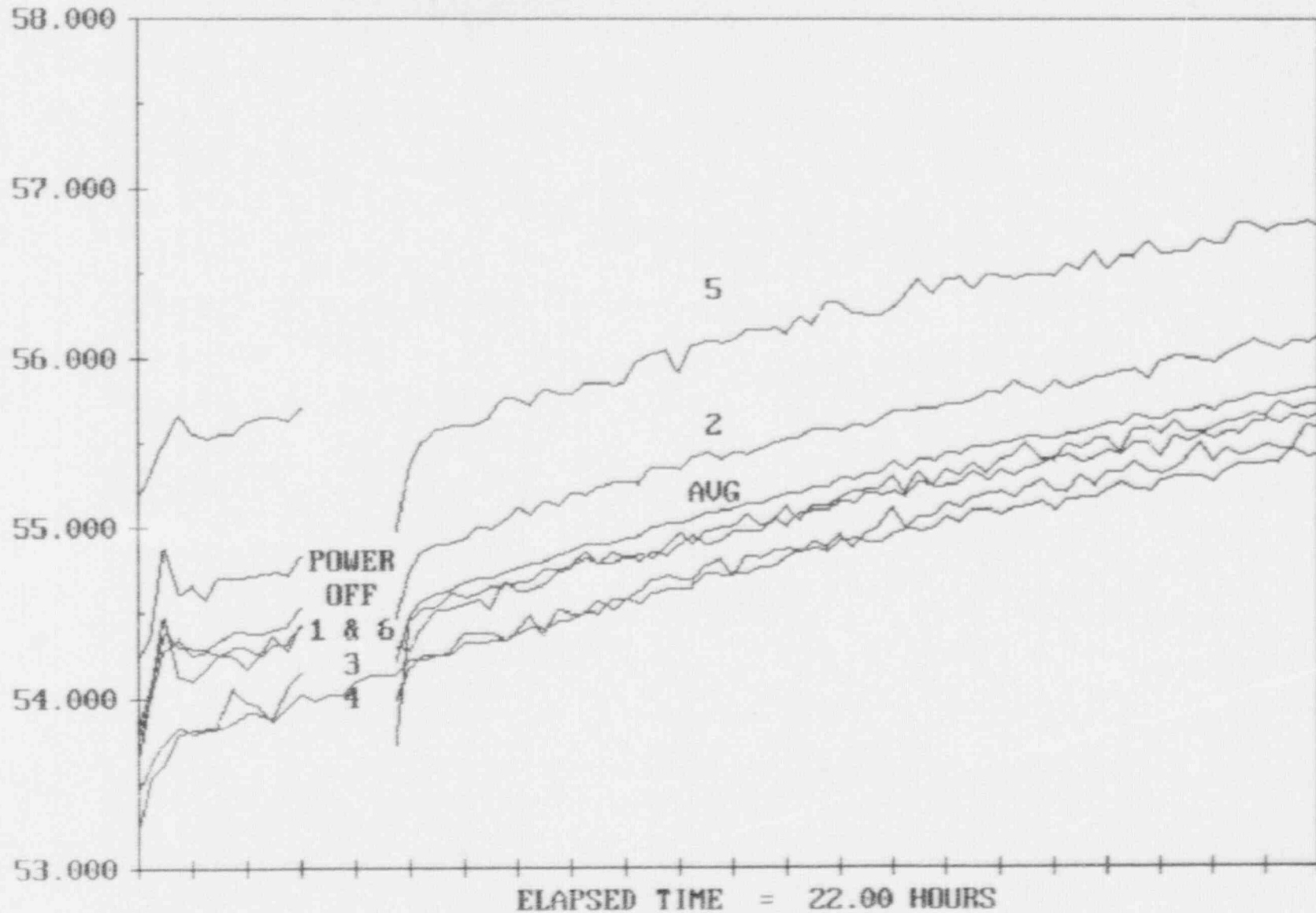
CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
DRYBULB TEMPERATURE SENSORS 1-18 DEGREES F
START TIME 645 DATE 115 END TIME 445 DATE 116



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
PRESSURE SENSORS 1, 2 & AVERAGE TOTAL PRESSURE PSIA
START TIME 645 DATE 115 END TIME 445 DATE 116



CALVERT CLIFFS - UNIT 2 JANUARY 1991 ILRT
DEWPOINT TEMPERATURE SENSORS 1-6 & AVERAGE DEGREES F
START TIME 645 DATE 115 END TIME 445 DATE 116



APPENDIX F

Test Data

SUMMARY OF MEASURED DATA AT 645 115

TEMP	1	=	526.2220	(	66.552)
TEMP	2	=	523.8390	(	64.169)
TEMP	3	=	524.8980	(	65.228)
TEMP	4	=	531.1040	(	71.434)
TEMP	5	=	516.2660	(	56.396)
TEMP	6	=	523.8430	(	64.173)
TEMP	7	=	523.4590	(	63.789)
TEMP	8	=	522.7710	(	63.101)
TEMP	9	=	522.9170	(	63.247)
TEMP	10	=	528.1240	(	68.454)
TEMP	11	=	522.8380	(	63.168)
TEMP	12	=	523.1890	(	63.519)
TEMP	13	=	523.3220	(	63.652)
TEMP	14	=	522.1120	(	62.442)
TEMP	15	=	522.1850	(	62.515)
TEMP	16	=	521.1980	(	61.528)
TEMP	17	=	521.4860	(	61.816)
TEMP	18	=	521.0720	(	61.402)

PRES	1	=	65.2710	(132240.0)
PRES	2	=	65.2738	(66435.0)

VPRS	1	=	.2032	(	53.590)
VPRS	2	=	.2080	(	54.228)
VPRS	3	=	.2003	(	53.204)
VPRS	4	=	.2020	(	53.437)
VPRS	5	=	.2152	(	55.163)
VPRS	6	=	.2044	(	53.753)

SUMMARY OF CORRECTED DATA

TIME = 645
DATE = 115

TEMPERATURE (DEGREES R.)	=	522.9351
CORRECTED PRESSURE (PSIA)	=	65.0676
VAPOR PRESSURE (PSIA)	=	.2047
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671700.1

SUMMARY OF MEASURED DATA AT 700 115

TEMP	1	=	525.4940	(	65.824)
TEMP	2	=	523.8630	(	64.193)
TEMP	3	=	524.4950	(	64.825)
TEMP	4	=	531.1620	(	71.492)
TEMP	5	=	516.1650	(	56.495)
TEMP	6	=	523.9780	(	64.308)
TEMP	7	=	523.5350	(	63.865)
TEMP	8	=	522.8750	(	63.205)
TEMP	9	=	523.0610	(	63.391)
TEMP	10	=	528.5750	(	68.905)
TEMP	11	=	523.1110	(	63.441)
TEMP	12	=	523.4590	(	63.789)
TEMP	13	=	523.5950	(	63.925)
TEMP	14	=	522.3830	(	62.713)
TEMP	15	=	522.4840	(	62.814)
TEMP	16	=	521.5350	(	61.865)
TEMP	17	=	521.8540	(	62.184)
TEMP	18	=	521.5230	(	61.853)

PRES	1	=	65.2656	(132229.0)
PRES	2	=	65.2669	(66428.0)

VPRS	1	=	.2067	(54.054)
VPRS	2	=	.2091	(54.370)
VPRS	3	=	.2027	(53.521)
VPRS	4	=	.2034	(53.617)
VPRS	5	=	.2165	(55.326)
VPRS	6	=	.2064	(54.016)

SUMMARY OF CORRECTED DATA

TIME = 700

DATE = 115

TEMPERATURE (DEGREES R.)	=	522.9969
CORRECTED PRESSURE (PSIA)	=	65.0594
VAPOR PRESSURE (PSIA)	=	.2068
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671535.8

SUMMARY OF MEASURED DATA AT 715 115

TEMP 1 =	524.8430	(65.173)
TEMP 2 =	523.8280	(64.158)
TEMP 3 =	524.2050	(64.535)
TEMP 4 =	531.5950	(71.925)
TEMP 5 =	516.2660	(56.596)
TEMP 6 =	524.0650	(64.395)
TEMP 7 =	523.6820	(64.012)
TEMP 8 =	523.1080	(63.438)
TEMP 9 =	523.2000	(63.530)
TEMP 10 =	528.6590	(68.989)
TEMP 11 =	523.3630	(63.693)
TEMP 12 =	523.7370	(64.067)
TEMP 13 =	524.0390	(64.369)
TEMP 14 =	522.6270	(62.957)
TEMP 15 =	522.7620	(63.092)
TEMP 16 =	521.7790	(62.109)
TEMP 17 =	522.1710	(62.501)
TEMP 18 =	521.8480	(62.178)

PRES 1 =	65.2641	(132226.0)
PRES 2 =	65.2669	(66428.0)

VPRS 1 =	.2099	(54.481)
VPRS 2 =	.2130	(54.879)
VPRS 3 =	.2034	(53.613)
VPRS 4 =	.2043	(53.736)
VPRS 5 =	.2179	(55.505)
VPRS 6 =	.2085	(54.293)

SUMMARY OF CORRECTED DATA

TIME = 715

DATE = 115

TEMPERATURE (DEGREES R.) =	523.0573
CORRECTED PRESSURE (PSIA) =	65.0564
VAPOR PRESSURE (PSIA) =	.2091
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	671427.3

SUMMARY OF MEASURED DATA AT 730 115

TEMP	1	=	524.4160	(	64.746)
TEMP	2	=	523.7780	(	64.108)
TEMP	3	=	524.0490	(	64.379)
TEMP	4	=	532.0710	(	72.401)
TEMP	5	=	516.2140	(	56.544)
TEMP	6	=	524.0050	(	64.335)
TEMP	7	=	523.6300	(	63.960)
TEMP	8	=	523.1290	(	63.459)
TEMP	9	=	523.2420	(	63.572)
TEMP	10	=	528.4100	(	68.740)
TEMP	11	=	523.5120	(	63.842)
TEMP	12	=	524.0510	(	64.381)
TEMP	13	=	524.2920	(	64.622)
TEMP	14	=	522.7330	(	63.063)
TEMP	15	=	523.0160	(	63.346)
TEMP	16	=	522.0320	(	62.362)
TEMP	17	=	522.4640	(	62.794)
TEMP	18	=	522.1100	(	62.440)

PRES	1	=	65.2690	(132236.0)
PRES	2	=	65.2709	(66432.0)

VPRS	1	=	.2072	(54.121)
VPRS	2	=	.2110	(54.617)
VPRS	3	=	.2047	(53.791)
VPRS	4	=	.2049	(53.826)
VPRS	5	=	.2191	(55.661)
VPRS	6	=	.2089	(54.344)

SUMMARY OF CORRECTED DATA

TIME = 730

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.0531
CORRECTED PRESSURE (PSIA)	=	65.0614
VAPOR PRESSURE (PSIA)	=	.2086
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671483.8

SUMMARY OF MEASURED DATA AT 745 115

TEMP 1 =	524.4600	(64.790)
TEMP 2 =	523.8220	(64.152)
TEMP 3 =	524.0340	(64.364)
TEMP 4 =	532.0010	(72.331)
TEMP 5 =	516.2170	(56.547)
TEMP 6 =	523.9960	(64.326)
TEMP 7 =	523.6600	(63.990)
TEMP 8 =	523.1750	(63.505)
TEMP 9 =	523.3090	(63.639)
TEMP 10 =	528.6330	(68.963)
TEMP 11 =	523.6730	(64.003)
TEMP 12 =	524.2160	(64.546)
TEMP 13 =	524.4930	(64.823)
TEMP 14 =	522.8580	(63.188)
TEMP 15 =	523.2070	(63.537)
TEMP 16 =	522.2820	(62.612)
TEMP 17 =	522.6940	(63.024)
TEMP 18 =	522.3560	(62.686)

PRES 1 =	65.2779	(132254.0)
PRES 2 =	65.2787	(66440.0)

VPRS 1 =	.2070	(54.098)
VPRS 2 =	.2113	(54.657)
VPRS 3 =	.2049	(53.816)
VPRS 4 =	.2047	(53.788)
VPRS 5 =	.2182	(55.548)
VPRS 6 =	.2082	(54.252)

SUMMARY OF CORRECTED DATA

TIME = 745

DATE = 115

TEMPERATURE (DEGREES R.) =	523.1417
CORRECTED PRESSURE (PSIA) =	65.0699
VAPOR PRESSURE (PSIA) =	.2084
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	671457.8

SUMMARY OF MEASURED DATA AT 800 115

TEMP	1	=	524.3440	(	64.674)
TEMP	2	=	523.8860	(	64.216)
TEMP	3	=	524.0800	(	64.410)
TEMP	4	=	532.0220	(	72.352)
TEMP	5	=	516.2380	(	56.568)
TEMP	6	=	524.0660	(	64.396)
TEMP	7	=	523.7050	(	64.035)
TEMP	8	=	523.2470	(	63.577)
TEMP	9	=	523.4300	(	63.760)
TEMP	10	=	528.3340	(	68.664)
TEMP	11	=	523.7950	(	64.125)
TEMP	12	=	524.3030	(	64.633)
TEMP	13	=	524.6090	(	64.939)
TEMP	14	=	523.0190	(	63.349)
TEMP	15	=	523.4020	(	63.732)
TEMP	16	=	522.4670	(	62.797)
TEMP	17	=	522.9020	(	63.232)
TEMP	18	=	522.5800	(	62.910)

PRES	1	=	65.2883	(132275.0)
PRES	2	=	65.2895	(66451.0)

VPRS	1	=	.2076	(54.179)
VPRS	2	=	.2106	(54.577)
VPRS	3	=	.2049	(53.819)
VPRS	4	=	.2049	(53.814)
VPRS	5	=	.2180	(55.520)
VPRS	6	=	.2083	(54.270)

SUMMARY OF CORRECTED DATA

TIME = 800

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.2031
CORRECTED PRESSURE (PSIA)	=	65.0804
VAPOR PRESSURE (PSIA)	=	.2085
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671488.0

SUMMARY OF MEASURED DATA AT 815 115

TEMP	1	=	524.3900	(	64.720)
TEMP	2	=	523.8560	(	64.186)
TEMP	3	=	524.1550	(	64.485)
TEMP	4	=	532.1210	(	72.451)
TEMP	5	=	516.3060	(	56.636)
TEMP	6	=	524.1070	(	64.437)
TEMP	7	=	523.7520	(	64.082)
TEMP	8	=	523.3260	(	63.656)
TEMP	9	=	523.4620	(	63.792)
TEMP	10	=	528.1540	(	68.484)
TEMP	11	=	523.9270	(	64.257)
TEMP	12	=	524.4060	(	64.736)
TEMP	13	=	524.7040	(	65.034)
TEMP	14	=	523.1350	(	63.465)
TEMP	15	=	523.5690	(	63.899)
TEMP	16	=	522.6940	(	63.024)
TEMP	17	=	523.0840	(	63.414)
TEMP	18	=	522.7460	(	63.076)

PRES	1	=	65.3016	(132302.0)
PRES	2	=	65.3013	(66463.0)

VPRS	1	=	.2082	(54.252)
VPRS	2	=	.2116	(54.695)
VPRS	3	=	.2051	(53.843)
VPRS	4	=	.2050	(53.828)
V. & S	5	=	.2183	(55.554)
VPRS	6	=	.2082	(54.254)

SUMMARY OF CORRECTED DATA

TIME = 815

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.2741
CORRECTED PRESSURE (PSIA)	=	65.0926
VAPOR PRESSURE (PSIA)	=	.2088
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671522.5

SUMMARY OF MEASURED DATA AT 830 115

TEMP	1	=	524.5010	(	64.831)
TEMP	2	=	523.9140	(	64.244)
TEMP	3	=	524.2140	(	64.544)
TEMP	4	=	532.1470	(	72.477)
TEMP	5	=	516.4000	(	56.730)
TEMP	6	=	524.1780	(	64.508)
TEMP	7	=	523.8180	(	64.148)
TEMP	8	=	523.4020	(	63.732)
TEMP	9	=	523.6020	(	63.932)
TEMP	10	=	528.3830	(	68.713)
TEMP	11	=	524.0450	(	64.375)
TEMP	12	=	524.4580	(	64.788)
TEMP	13	=	524.8260	(	65.156)
TEMP	14	=	523.2380	(	63.568)
TEMP	15	=	523.7380	(	64.068)
TEMP	16	=	522.8560	(	63.186)
TEMP	17	=	523.2290	(	63.559)
TEMP	18	=	522.9250	(	63.255)

PRES	1	=	65.3120	(132323.0)
PRES	2	=	65.3121	(66474.0)

VPRS	1	=	.2080	(54.235)
VPRS	2	=	.2116	(54.598)
VPRS	3	=	.2067	(54.063)
VPRS	4	=	.2052	(53.865)
VPRS	5	=	.2182	(55.546)
VPRS	6	=	.2085	(54.296)

SUMMARY OF CORRECTED DATA

TIME = 830

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.3784
CORRECTED PRESSURE (PSIA)	=	65.1028
VAPOR PRESSURE (PSIA)	=	.2092
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671493.6

SUMMARY OF MEASURED DATA AT 845 115

TEMP	1	=	524.5060	(	64.836)
TEMP	2	=	523.9590	(	64.289)
TEMP	3	=	524.3090	(	64.639)
TEMP	4	=	532.2500	(	72.580)
TEMP	5	=	516.4550	(	56.785)
TEMP	6	=	524.2950	(	64.625)
TEMP	7	=	523.9060	(	64.236)
TEMP	8	=	523.5050	(	63.835)
TEMP	9	=	523.6790	(	64.009)
TEMP	10	=	528.4560	(	68.786)
TEMP	11	=	524.1460	(	64.476)
TEMP	12	=	524.5850	(	64.915)
TEMP	13	=	524.7650	(	65.095)
TEMP	14	=	523.2850	(	63.615)
TEMP	15	=	523.8750	(	64.205)
TEMP	16	=	523.0150	(	63.345)
TEMP	17	=	523.3670	(	63.697)
TEMP	18	=	523.0530	(	63.383)

PRES	1	=	65.3228	(132345.0)
PRES	2	=	65.3238	(66486.0)

VPRS	1	=	.2075	(54.171)
VPRS	2	=	.2117	(54.716)
VPRS	3	=	.2061	(53.976)
VPRS	4	=	.2056	(53.913)
VPRS	5	=	.2188	(55.625)
VPRS	6	=	.2084	(54.287)

SUMMARY OF CORRECTED DATA

TIME = 845

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.4575
CORRECTED PRESSURE (PSIA)	=	65.1143
VAPOR PRESSURE (PSIA)	=	.2091
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671510.4

SUMMARY OF MEASURED DATA AT 900 115

TEMP	1	=	524.5300	(	64.860)
TEMP	2	=	524.0370	(	64.367)
TEMP	3	=	524.3500	(	64.680)
TEMP	4	=	532.5300	(	72.860)
TEMP	5	=	516.5100	(	56.840)
TEMP	6	=	524.3650	(	64.695)
TEMP	7	=	523.9950	(	64.325)
TEMP	8	=	523.5930	(	63.923)
TEMP	9	=	523.7700	(	64.100)
TEMP	10	=	528.4780	(	68.808)
TEMP	11	=	524.2370	(	64.567)
TEMP	12	=	524.7130	(	65.043)
TEMP	13	=	525.0660	(	65.396)
TEMP	14	=	523.3260	(	63.656)
TEMP	15	=	524.0190	(	64.349)
TEMP	16	=	523.1640	(	63.494)
TEMP	17	=	523.4890	(	63.819)
TEMP	18	=	523.1780	(	63.508)

PRES	1	=	65.3352	(132370.0)
PRES	2	=	65.3337	(66496.0)

VPRS	1	=	.2081	(54.248)
VPRS	2	=	.2117	(54.719)
VPRS	3	=	.2059	(53.949)
VPRS	4	=	.2055	(53.894)
VPRS	5	=	.2191	(55.656)
VPRS	6	=	.2081	(54.245)

SUMMARY OF CORRECTED DATA

TIME = 900

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.5432
CORRECTED PRESSURE (PSIA)	=	65.1253
VAPOR PRESSURE (PSIA)	=	.2091
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671514.3

SUMMARY OF MEASURED DATA AT 915 115

TEMP	1	=	524.6570	(	64.987)
TEMP	2	=	524.0890	(	64.419)
TEMP	3	=	524.4830	(	64.813)
TEMP	4	=	532.6660	(	72.996)
TEMP	5	=	516.5990	(	56.929)
TEMP	6	=	524.4420	(	64.772)
TEMP	7	=	524.0250	(	64.355)
TEMP	8	=	523.6470	(	63.977)
TEMP	9	=	523.7600	(	64.090)
TEMP	10	=	528.4450	(	68.775)
TEMP	11	=	524.3350	(	64.665)
TEMP	12	=	524.7270	(	65.057)
TEMP	13	=	525.0170	(	65.347)
TEMP	14	=	523.4480	(	63.778)
TEMP	15	=	524.1440	(	64.474)
TEMP	16	=	523.2770	(	63.607)
TEMP	17	=	523.6120	(	63.942)
TEMP	18	=	523.2680	(	63.598)

PRES	1	=	65.3450	(132390.0)
PRES	2	=	65.3454	(66508.0)

VPRS	1	=	.2090	(54.362)
VPRS	2	=	.2119	(54.740)
VPRS	3	=	.2052	(53.859)
VPRS	4	=	.2053	(53.872)
VPRS	5	=	.2190	(55.648)
VPRS	6	=	.2086	(54.309)

SUMMARY OF CORRECTED DATA

TIME = 915

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.6198
CORRECTED PRESSURE (PSIA)	=	65.1360
VAPOR PRESSURE (PSIA)	=	.2093
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671526.1

SUMMARY OF MEASURED DATA AT 930 115

TEMP	1	=	524.7560	(	65.086)
TEMP	2	=	524.1730	(	64.503)
TEMP	3	=	524.6050	(	64.935)
TEMP	4	=	532.7090	(	73.039)
TEMP	5	=	516.6690	(	56.999)
TEMP	6	=	524.5030	(	64.833)
TEMP	7	=	524.1070	(	64.437)
TEMP	8	=	523.7490	(	64.079)
TEMP	9	=	523.8790	(	64.209)
TEMP	10	=	528.4360	(	68.766)
TEMP	11	=	524.4340	(	64.764)
TEMP	12	=	524.8640	(	65.194)
TEMP	13	=	525.2690	(	65.599)
TEMP	14	=	523.5780	(	63.908)
TEMP	15	=	524.2580	(	64.588)
TEMP	16	=	523.3700	(	63.700)
TEMP	17	=	523.7270	(	64.057)
TEMP	18	=	523.3810	(	63.711)

PRES	1	=	65.3529	(132406.0)
PRES	2	=	65.3552	(66518.0)

VPRS	1	=	.2083	(54.274)
VPRS	2	=	.2117	(54.716)
VPRS	3	=	.2067	(54.057)
VPRS	4	=	.2059	(53.950)
VPRS	5	=	.2189	(55.629)
VPRS	6	=	.2087	(54.322)

SUMMARY OF CORRECTED DATA

TIME = 930
DATE = 115

TEMPERATURE (DEGREES R.)	=	523.7186
CORRECTED PRESSURE (PSIA)	=	65.1446
VAPOR PRESSURE (PSIA)	=	.2095
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671488.7

SUMMARY OF MEASURED DATA AT 945 115

TEMP	1	=	524.8920	(	65.222)
TEMP	2	=	524.2550	(	64.585)
TEMP	3	=	524.6890	(	65.019)
TEMP	4	=	532.1270	(	72.457)
TEMP	5	=	516.8610	(	57.191)
TEMP	6	=	524.6830	(	65.013)
TEMP	7	=	524.2680	(	64.598)
TEMP	8	=	523.8690	(	64.199)
TEMP	9	=	524.0600	(	64.390)
TEMP	10	=	528.9440	(	69.274)
TEMP	11	=	524.5090	(	64.839)
TEMP	12	=	524.9530	(	65.283)
TEMP	13	=	525.3480	(	65.678)
TEMP	14	=	523.6660	(	63.996)
TEMP	15	=	524.3820	(	64.712)
TEMP	16	=	523.5210	(	63.851)
TEMP	17	=	523.8280	(	64.158)
TEMP	18	=	523.4830	(	63.813)

PRES	1	=	65.3628	(	132426.0)
PRES	2	=	65.3621	(	66525.0)

VPRS	1	=	.2095	(	54.431)
VPRS	2	=	.2126	(	54.829)
VPRS	3	=	.2074	(	54.150)
VPRS	4	=	.2064	(	54.020)
VPRS	5	=	.2194	(	55.697)
VPRS	6	=	.2094	(	54.412)

SUMMARY OF CORRECTED DATA

TIME = 945

DATE = 115

TEMPERATURE (DEGREES R.)	=	523.8591
CORRECTED PRESSURE (PSIA)	=	65.1522
VAPOR PRESSURE (PSIA)	=	.2103
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	671386.4

SUMMARY OF MEASURED DATA AT 1000 115

TEMP	1	=	524.7890	(	65.119)
TEMP	2	=	524.2140	(	64.544)
TEMP	3	=	524.6510	(	64.981)
TEMP	4	=	530.1970	(	70.527)
TEMP	5	=	527.5360	(	67.866)
TEMP	6	=	524.4060	(	64.736)
TEMP	7	=	524.2310	(	64.561)
TEMP	8	=	523.7920	(	64.122)
TEMP	9	=	523.9750	(	64.305)
TEMP	10	=	528.9720	(	69.302)
TEMP	11	=	524.4490	(	64.779)
TEMP	12	=	524.9770	(	65.307)
TEMP	13	=	525.0260	(	65.356)
TEMP	14	=	523.5980	(	63.928)
TEMP	15	=	524.3120	(	64.642)
TEMP	16	=	523.5570	(	63.887)
TEMP	17	=	523.8740	(	64.204)
TEMP	18	=	523.3290	(	63.659)

PRES	1	=	65.3628	(132426.0)
PRES	2	=	65.3631	(66526.0)

VPRS	1	=	.2982	(	64.308)
VPRS	2	=	.2997	(	64.460)
VPRS	3	=	.3008	(	64.561)
VPRS	4	=	.2062	(	53.987)
VPRS	5	=	.3138	(	65.777)
VPRS	6	=	.2931	(	63.821)

SUMMARY OF CORRECTED DATA

TIME = 1000

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.7648
CORRECTED PRESSURE (PSIA)	=	65.0713
VAPOR PRESSURE (PSIA)	=	.2917
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669395.4

SUMMARY OF MEASURED DATA AT 1015 115

TEMP	1	=	524.6920	(	65.022)
TEMP	2	=	524.1470	(	64.477)
TEMP	3	=	524.5940	(	64.924)
TEMP	4	=	529.8370	(	70.167)
TEMP	5	=	527.4640	(	67.794)
TEMP	6	=	524.3000	(	64.630)
TEMP	7	=	524.1460	(	64.476)
TEMP	8	=	523.7030	(	64.033)
TEMP	9	=	523.9350	(	64.265)
TEMP	10	=	528.8700	(	69.200)
TEMP	11	=	524.4170	(	64.747)
TEMP	12	=	524.9270	(	65.257)
TEMP	13	=	524.9990	(	65.329)
TEMP	14	=	523.6330	(	63.963)
TEMP	15	=	524.3270	(	64.657)
TEMP	16	=	523.5900	(	63.920)
TEMP	17	=	523.8820	(	64.212)
TEMP	18	=	523.2830	(	63.613)

PRES	1	=	65.3628	(132426.0)
PRES	2	=	65.3621	(66525.0)

VPRS	1	=	.2965	(64.151)
VPRS	2	=	.2982	(64.312)
VPRS	3	=	.2990	(64.390)
VPRS	4	=	.2064	(54.020)
VPRS	5	=	.3116	(65.573)
VPRS	6	=	.2921	(63.719)

SUMMARY OF CORRECTED DATA

TIME = 1015

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.7086
CORRECTED PRESSURE (PSIA)	=	65.0722
VAPOR PRESSURE (PSIA)	=	.2902
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669476.9

SUMMARY OF MEASURED DATA AT 1030 115

TEMP	1	=	524.6580	(	64.988)
TEMP	2	=	524.1260	(	64.456)
TEMP	3	=	524.5510	(	64.881)
TEMP	4	=	529.8450	(	70.175)
TEMP	5	=	527.3800	(	67.710)
TEMP	6	=	524.2570	(	64.587)
TEMP	7	=	524.1240	(	64.454)
TEMP	8	=	523.6890	(	64.019)
TEMP	9	=	523.9350	(	64.265)
TEMP	10	=	528.6910	(	69.021)
TEMP	11	=	524.4190	(	64.749)
TEMP	12	=	524.9420	(	65.272)
TEMP	13	=	525.0500	(	65.380)
TEMP	14	=	523.7240	(	64.054)
TEMP	15	=	524.3300	(	64.660)
TEMP	16	=	523.6070	(	63.937)
TEMP	17	=	523.8970	(	64.227)
TEMP	18	=	523.3140	(	63.644)

PRES	1	=	65.3584	(132417.0)
PRES	2	=	65.3611	(66524.0)

VPRS	1	=	.2951	(64.012)
VPRS	2	=	.2967	(64.172)
VPRS	3	=	.2973	(64.221)
VPRS	4	=	.2065	(54.031)
VPRS	5	=	.3100	(65.422)
VPRS	6	=	.2913	(63.642)

SUMMARY OF CORRECTED DATA

TIME = 1030

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.6873
CORRECTED PRESSURE (PSIA)	=	65.0708
VAPOR PRESSURE (PSIA)	=	.2890
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669489.5

SUMMARY OF MEASURED DATA AT 1045 115

TEMP 1 =	524.6540	(64.984)
TEMP 2 =	524.1230	(64.453)
TEMP 3 =	524.5580	(64.288)
TEMP 4 =	529.9590	(70.289)
TEMP 5 =	527.3900	(67.720)
TEMP 6 =	524.2290	(64.559)
TEMP 7 =	524.1230	(64.453)
TEMP 8 =	523.7020	(64.032)
TEMP 9 =	523.9820	(64.312)
TEMP 10 =	528.5650	(68.895)
TEMP 11 =	524.4350	(64.765)
TEMP 12 =	524.9480	(65.278)
TEMP 13 =	525.0350	(65.365)
TEMP 14 =	523.7340	(64.064)
TEMP 15 =	524.3610	(64.691)
TEMP 16 =	523.6540	(63.984)
TEMP 17 =	523.9260	(64.256)
TEMP 18 =	523.3340	(63.664)

PRES 1 =	65.3584	(132417.0)
PRES 2 =	65.3611	(66524.0)

VPRS 1 =	.2940	(63.909)
VPRS 2 =	.2955	(64.054)
VPRS 3 =	.2959	(64.086)
VPRS 4 =	.2070	(54.095)
VPRS 5 =	.3089	(65.327)
VPRS 6 =	.2907	(63.589)

SUMMARY OF CORRECTED DATA

TIME = 1045

DATE = 115

TEMPERATURE (DEGREES R.) =	524.6884
CORRECTED PRESSURE (PSIA) =	65.0718
VAPOR PRESSURE (PSIA) =	.2880
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669497.8

SUMMARY OF MEASURED DATA AT 1100 115

TEMP	1	=	524.6750	(	65.005)
TEMP	2	=	524.1410	(	64.471)
TEMP	3	=	524.5930	(	64.923)
TEMP	4	=	530.2380	(	70.568)
TEMP	5	=	527.4080	(	67.738)
TEMP	6	=	524.2220	(	64.552)
TEMP	7	=	524.1240	(	64.454)
TEMP	8	=	523.7080	(	64.038)
TEMP	9	=	523.9490	(	64.279)
TEMP	10	=	528.7000	(	69.030)
TEMP	11	=	524.4520	(	64.782)
TEMP	12	=	524.9500	(	65.280)
TEMP	13	=	524.8550	(	65.185)
TEMP	14	=	523.7640	(	64.094)
TEMP	15	=	524.3640	(	64.694)
TEMP	16	=	523.6800	(	64.010)
TEMP	17	=	523.9460	(	64.276)
TEMP	18	=	523.3440	(	63.674)

PRES	1	=	65.3599	(132420.0)
PRES	2	=	65.3611	(66524.0)

VPRS	1	=	.2934	(	63.851)
VPRS	2	=	.2949	(	63.990)
VPRS	3	=	.2948	(	63.986)
VPRS	4	=	.2073	(	54.133)
VPRS	5	=	.3082	(	65.261)
VPRS	6	=	.2905	(	63.569)

SUMMARY OF CORRECTED DATA

TIME = 1100

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.6988
CORRECTED PRESSURE (PSIA)	=	65.0731
VAPOR PRESSURE (PSIA)	=	.2874
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	665498.0

SUMMARY OF MEASURED DATA AT 1115 115

TEMP	1	=	524.6260	(	64.956)
TEMP	2	=	524.1520	(	64.482)
TEMP	3	=	524.6030	(	64.933)
TEMP	4	=	530.2350	(	70.555)
TEMP	5	=	527.4080	(	67.738)
TEMP	6	=	524.2580	(	64.588)
TEMP	7	=	524.1590	(	64.489)
TEMP	8	=	523.7410	(	64.071)
TEMP	9	=	523.9460	(	64.276)
TEMP	10	=	528.5320	(	68.862)
TEMP	11	=	524.4660	(	64.796)
TEMP	12	=	525.0050	(	65.335)
TEMP	13	=	524.9450	(	65.275)
TEMP	14	=	523.7690	(	64.099)
TEMP	15	=	524.3900	(	64.720)
TEMP	16	=	523.7180	(	64.048)
TEMP	17	=	523.9820	(	64.312)
TEMP	18	=	523.3870	(	63.717)

PRES	1	=	65.3618	(132424.0)
PRES	2	=	65.3611	(66524.0)

VPRS	1	=	.2932	(	63.829)
VPRS	2	=	.2946	(	63.964)
VPRS	3	=	.2942	(	63.922)
VPRS	4	=	.2073	(	54.139)
VPRS	5	=	.3080	(	65.235)
VPRS	6	=	.2904	(	63.559)

SUMMARY OF CORRECTED DATA

TIME = 1115

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.7092
CORRECTED PRESSURE (PSIA)	=	65.0743
VAPOR PRESSURE (PSIA)	=	.2871
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669497.8

SUMMARY OF MEASURED DATA AT 1130 115

TEMP	1	=	524.7010	(	65.031)
TEMP	2	=	524.2450	(	64.573)
TEMP	3	=	524.6780	(	65.008)
TEMP	4	=	530.3060	(	70.636)
TEMP	5	=	527.4580	(	67.788)
TEMP	6	=	524.4900	(	64.820)
TEMP	7	=	524.2100	(	64.540)
TEMP	8	=	523.7560	(	64.086)
TEMP	9	=	524.0050	(	64.335)
TEMP	10	=	528.8220	(	69.152)
TEMP	11	=	524.6220	(	64.952)
TEMP	12	=	525.0520	(	65.382)
TEMP	13	=	524.9950	(	65.325)
TEMP	14	=	523.1150	(	64.045)
TEMP	15	=	524.4080	(	64.738)
TEMP	16	=	523.7760	(	64.106)
TEMP	17	=	524.0140	(	64.344)
TEMP	18	=	523.4670	(	63.797)

PRES	1	=	65.3653	(132431.0)
PRES	2	=	65.3641	(66527.0)

VPRS	1	=	.2085	(54.298)
VPRS	2	=	.2098	(54.464)
VPRS	3	=	.2062	(53.990)
VPRS	4	=	.2074	(54.153)
VPRS	5	=	.2137	(54.969)
VPRS	6	=	.2042	(53.730)

SUMMARY OF CORRECTED DATA

TIME = 1130

DATE = 115

TEMPERATURE (DEGREES R.)	=	524.7942
CORRECTED PRESSURE (PSIA)	=	65.1568
VAPOR PRESSURE (PSIA)	=	.2079
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670237.4

SUMMARY OF MEASURED DATA AT 1145 115

TEMP	1	=	524.7510	(	65.081)
TEMP	2	=	524.2630	(	64.593)
TEMP	3	=	524.7150	(	65.045)
TEMP	4	=	530.4410	(	70.771)
TEMP	5	=	527.5760	(	67.906)
TEMP	6	=	524.6190	(	64.949)
TEMP	7	=	524.2830	(	64.613)
TEMP	8	=	523.8450	(	64.175)
TEMP	9	=	524.0460	(	64.376)
TEMP	10	=	528.4060	(	68.736)
TEMP	11	=	524.7480	(	65.078)
TEMP	12	=	525.1370	(	65.467)
TEMP	13	=	524.9470	(	65.277)
TEMP	14	=	523.7980	(	64.128)
TEMP	15	=	524.5150	(	64.845)
TEMP	16	=	523.8680	(	64.198)
TEMP	17	=	524.1120	(	64.442)
TEMP	18	=	523.5660	(	63.896)

PRES	1	=	65.3766	(132454.0)
PRES	2	=	65.3749	(66538.0)

VPRS	1	=	.2084	(	54.281)
VPRS	2	=	.2119	(	54.742)
VPRS	3	=	.2077	(	54.188)
VPRS	4	=	.2079	(	54.220)
VPRS	5	=	.2166	(	55.345)
VPRS	6	=	.2098	(	54.463)

SUMMARY OF CORRECTED DATA

TIME = 1145

DATE = 115

TEMPERATURE (DEGREES ..)	=	524.8493
CORRECTED PRESSURE (PSIA)	=	65.1659
VAPOR PRESSURE (PSIA)	=	.2099
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670260.4

SUMMARY OF MEASURED DATA AT 1200 115

TEMP 1 =	524.8490	(65.179)
TEMP 2 =	524.3300	(64.660)
TEMP 3 =	524.8060	(65.136)
TEMP 4 =	530.4980	(70.828)
TEMP 5 =	527.6630	(67.993)
TEMP 6 =	524.6840	(65.014)
TEMP 7 =	524.3490	(64.679)
TEMP 8 =	523.9180	(64.248)
TEMP 9 =	524.1670	(64.497)
TEMP 10 =	528.6350	(68.965)
TEMP 11 =	524.8050	(65.135)
TEMP 12 =	525.1910	(65.521)
TEMP 13 =	525.1800	(65.510)
TEMP 14 =	523.8660	(64.196)
TEMP 15 =	524.6230	(64.953)
TEMP 16 =	523.9300	(64.260)
TEMP 17 =	524.1910	(64.521)
TEMP 18 =	523.6570	(63.987)

PRES 1 =	65.3865	(132474.0)
PRES 2 =	65.3837	(66547.0)

VPRS 1 =	.2094	(54.412)
VPRS 2 =	.2129	(54.866)
VPRS 3 =	.2081	(54.245)
VPRS 4 =	.2080	(54.228)
VPRS 5 =	.2179	(55.513)
VPRS 6 =	.2103	(54.530)

SUMMARY OF CORRECTED DATA

TIME = 1200

DATE = 115

TEMPERATURE (DEGREES R.) =	524.9406
CORRECTED PRESSURE (PSIA) =	65.1745
VAPOR PRESSURE (PSIA) =	.2106
VOLUME (CJ.FT.) =	2000000.0
AIR MASS (LBM) =	670232.5

SUMMARY OF MEASURED DATA AT 1215 115

TEMP	1	=	524.9450	(	65.275)
TEMP	2	=	524.4110	(	64.741)
TEMP	3	=	524.8810	(	65.211)
TEMP	4	=	530.5510	(	70.881)
TEMP	5	=	527.7480	(	68.078)
TEMP	6	=	524.7850	(	65.115)
TEMP	7	=	524.4190	(	64.749)
TEMP	8	=	524.0040	(	64.334)
TEMP	9	=	524.1870	(	64.517)
TEMP	10	=	528.7130	(	69.043)
TEMP	11	=	524.8570	(	65.187)
TEMP	12	=	525.2290	(	65.559)
TEMP	13	=	525.3420	(	65.672)
TEMP	14	=	523.9150	(	64.245)
TEMP	15	=	524.7240	(	65.054)
TEMP	16	=	524.0020	(	64.332)
TEMP	17	=	524.2630	(	64.593)
TEMP	18	=	523.7200	(	64.050)

PRES	1	=	65.3934	(132488.0)
PRES	2	=	65.3916	(66555.0)

VPRS	1	=	.2102	(	54.513)
VPRS	2	=	.2131	(	54.895)
VPRS	3	=	.2081	(	54.246)
VPRS	4	=	.2082	(	54.255)
VPRS	5	=	.2184	(	55.572)
VPRS	6	=	.2103	(	54.530)

SUMMARY OF CORRECTED DATA

TIME = 1215

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.0213
CORRECTED PRESSURE (PSIA)	=	65.1816
VAPOR PRESSURE (PSIA)	=	.2109
VOLUME (CU.FT.)	=	2000000.0
ATX MASS (LEM)	=	670202.4

SUMMARY OF MEASURED DATA AT 1230 115

TEMP	1	=	524.9740	(	65.304)
TEMP	2	=	524.4690	(	64.799)
TEMP	3	=	524.9150	(	65.245)
TEMP	4	=	530.5770	(	70.907)
TEMP	5	=	527.8230	(	68.153)
TEMP	6	=	524.7910	(	65.121)
TEMP	7	=	524.4770	(	64.807)
TEMP	8	=	524.0600	(	64.390)
TEMP	9	=	524.2710	(	64.601)
TEMP	10	=	528.7510	(	69.081)
TEMP	11	=	524.9240	(	65.254)
TEMP	12	=	525.3360	(	65.666)
TEMP	13	=	525.2730	(	65.603)
TEMP	14	=	523.9780	(	64.308)
TEMP	15	=	524.7800	(	65.110)
TEMP	16	=	524.0490	(	64.379)
TEMP	17	=	524.3270	(	64.657)
TEMP	18	=	523.7850	(	64.115)

PRES	1	=	65.4008	(132503.0)
PRES	2	=	65.3984	(66562.0)

VPRS	1	=	.2102	(	54.521)
VPRS	2	=	.2132	(	54.910)
VPRS	3	=	.2084	(	54.281)
VPRS	4	=	.2083	(	54.266)
VPRS	5	=	.2187	(	55.606)
VPRS	6	=	.2110	(	54.618)

SUMMARY OF CORRECTED DATA

TIME = 1230

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.0673
CORRECTED PRESSURE (PSIA)	=	65.1885
VAPOR PRESSURE (PSIA)	=	.2112
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670214.6

SUMMARY OF MEASURED DATA AT 1245 115

TEMP	1	=	525.0310	(	65.361)
TEMP	2	=	524.5240	(	64.854)
TEMP	3	=	524.9850	(	65.315)
TEMP	4	=	530.5890	(	70.919)
TEMP	5	=	527.8560	(	68.186)
TEMP	6	=	525.8750	(	65.205)
TEMP	7	=	524.5300	(	64.860)
TEMP	8	=	524.1100	(	64.440)
TEMP	9	=	524.3090	(	64.639)
TEMP	10	=	528.4470	(	68.777)
TEMP	11	=	525.0030	(	65.333)
TEMP	12	=	525.3170	(	65.647)
TEMP	13	=	525.2180	(	65.548)
TEMP	14	=	524.0800	(	64.410)
TEMP	15	=	524.8430	(	65.173)
TEMP	16	=	524.1260	(	64.456)
TEMP	17	=	524.3840	(	64.714)
TEMP	18	=	523.8270	(	64.157)

PRES	1	=	65.4072	(132516.0)
PRES	2	=	65.4043	(66568.0)

VPRS	1	=	.2105	(	54.556)
VPRS	2	=	.2135	(	54.943)
VPRS	3	=	.2091	(	54.379)
VPRS	4	=	.2087	(	54.325)
VPRS	5	=	.2186	(	55.601)
VPRS	6	=	.2107	(	54.588)

SUMMARY OF CORRECTED DATA

TIME = 1245

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.1065
CORRECTED PRESSURE (PSIA)	=	65.1944
VAPOR PRESSURE (PSIA)	=	.2114
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670225.0

SUMMARY OF MEASURED DATA AT 1300 115

TEMP	1	=	525.0670	(	65.397)
TEMP	2	=	524.5590	(	64.889)
TEMP	3	=	525.0400	(	65.370)
TEMP	4	=	530.5210	(	70.851)
TEMP	5	=	527.9040	(	68.234)
TEMP	6	=	524.9020	(	65.232)
TEMP	7	=	524.5910	(	64.921)
TEMP	8	=	524.1730	(	64.503)
TEMP	9	=	524.3590	(	64.689)
TEMP	10	=	528.6220	(	68.952)
TEMP	11	=	525.0340	(	65.364)
TEMP	12	=	525.4200	(	65.750)
TEMP	13	=	525.3540	(	65.684)
TEMP	14	=	524.1150	(	64.445)
TEMP	15	=	524.9040	(	65.234)
TEMP	16	=	524.1750	(	64.505)
TEMP	17	=	524.4480	(	64.778)
TEMP	18	=	523.8880	(	64.218)

PRES	1	=	65.4127	(132527.0)
PRES	2	=	65.4102	(66574.0)

VPRS	1	=	.2107	(	54.580)
VPRS	2	=	.2139	(	55.001)
VPRS	3	=	.2091	(	54.371)
VPRS	4	=	.2088	(	54.330)
VPRS	5	=	.2187	(	55.607)
VPRS	6	=	.2109	(	54.615)

SUMMARY OF CORRECTED DATA

TIME = 1300

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.1633
CORRECTED PRESSURE (PSIA)	=	65.1998
VAPOR PRESSURE (PSIA)	=	.2116
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670208.9

SUMMARY OF MEASURED DATA AT 1315 115

TEMP	1	=	525.1280	(	65.458)
TEMP	2	=	524.6080	(	64.938)
TEMP	3	=	525.0890	(	65.419)
TEMP	4	=	530.6310	(	70.961)
TEMP	5	=	527.9600	(	68.290)
TEMP	6	=	524.9560	(	65.286)
TEMP	7	=	524.3990	(	64.929)
TEMP	8	=	524.1900	(	64.520)
TEMP	9	=	524.3940	(	64.724)
TEMP	10	=	529.1050	(	69.435)
TEMP	11	=	525.1010	(	65.431)
TEMP	12	=	525.4170	(	65.747)
TEMP	13	=	525.5140	(	65.844)
TEMP	14	=	524.1090	(	64.439)
TEMP	15	=	524.9270	(	65.257)
TEMP	16	=	524.2280	(	64.558)
TEMP	17	=	524.4980	(	64.828)
TEMP	18	=	523.9260	(	64.256)

PRES	1	=	65.4142	(	132530.0)
PRES	2	=	65.4122	(	66576.0)

VPRS	1	=	.2102	(	54.515)
VPRS	2	=	.2138	(	54.991)
VPRS	3	=	.2091	(	54.377)
VPRS	4	=	.2088	(	54.338)
VPRS	5	=	.2190	(	55.650)
VPRS	6	=	.2112	(	54.649)

SUMMARY OF CORRECTED DATA

TIME = 1315
DATE = 115

TEMPERATURE (DEGREES R.)	=	525.2285
CORRECTED PRESSURE (PSIA)	=	65.2016
VAPOR PRESSURE (PSIA)	=	.2116
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670143.9

SUMMARY OF MEASURED DATA AT 1330 115

TEMP	1	=	525.1250	(	65.455)
TEMP	2	=	524.6430	(	64.973)
TEMP	3	=	525.1450	(	65.475)
TEMP	4	=	530.6410	(	70.971)
TEMP	5	=	527.9660	(	68.296)
TEMP	6	=	525.0120	(	65.342)
TEMP	7	=	4.6490	(	64.979)
TEMP	8	=	.2260	(	64.556)
TEMP	9	=	.4480	(	64.778)
TEMP	10	=	.6500	(	68.980)
TEMP	11	=	525.1280	(	65.458)
TEMP	12	=	525.4270	(	65.757)
TEMP	13	=	525.3650	(	65.695)
TEMP	14	=	524.2550	(	64.585)
TEMP	15	=	524.9450	(	65.275)
TEMP	16	=	524.2650	(	64.595)
TEMP	17	=	524.5360	(	64.866)
TEMP	18	=	523.9730	(	64.303)

PRES	1	=	65.4112	(132524.0)
PRES	2	=	65.4092	(66573.0)

VPRS	1	=	.2114	(54.670)
VPRS	2	=	.2143	(55.047)
VPRS	3	=	.2088	(54.332)
VPRS	4	=	.2088	(54.333)
VPRS	5	=	.2200	(55.767)
VPRS	6	=	.2113	(54.657)

SUMMARY OF CORRECTED DATA

TIME = 1330

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.2380
CORRECTED PRESSURE (PSIA)	=	65.1983
VAPOR PRESSURE (PSIA)	=	.2119
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670097.6

SUMMARY OF MEASURED DATA AT 1345 115

TEMP	1	=	525.2090	(	65.539)
TEMP	2	=	524.6770	(	65.007)
TEMP	3	=	525.1950	(	65.525)
TEMP	4	=	529.8250	(	70.155)
TEMP	5	=	528.0460	(	68.376)
TEMP	6	=	525.0180	(	65.348)
TEMP	7	=	524.7100	(	65.040)
TEMP	8	=	524.2910	(	64.621)
TEMP	9	=	524.5060	(	64.836)
TEMP	10	=	528.6800	(	69.010)
TEMP	11	=	525.1620	(	65.492)
TEMP	12	=	525.5080	(	65.838)
TEMP	13	=	525.3540	(	65.684)
TEMP	14	=	524.2420	(	64.572)
TEMP	15	=	524.9970	(	65.327)
TEMP	16	=	524.3290	(	64.659)
TEMP	17	=	524.5850	(	64.915)
TEMP	18	=	524.0230	(	64.353)

PRES	1	=	65.4166	(	132535.0)
PRES	2	=	65.4141	(	66578.0)

VPRS	1	=	.2110	(	54.628)
VPRS	2	=	.2148	(	55.110)
VPRS	3	=	.2092	(	54.391)
VPRS	4	=	.2091	(	54.377)
VPRS	5	=	.2198	(	55.751)
VPRS	6	=	.2114	(	54.673)

SUMMARY OF CORRECTED DATA

TIME = 1345

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.2844
CORRECTED PRESSURE (PSIA)	=	65.2033
VAPOR PRESSURE (PSIA)	=	.2121
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670089.8

SUMMARY OF MEASURED DATA AT 1400 115

TEMP 1 =	525.2060	(65.536)
TEMP 2 =	524.7280	(65.058)
TEMP 3 =	525.1830	(65.513)
TEMP 4 =	529.8910	(70.221)
TEMP 5 =	528.0640	(68.394)
TEMP 6 =	525.0410	(65.371)
TEMP 7 =	524.7180	(65.048)
TEMP 8 =	524.2950	(64.625)
TEMP 9 =	524.6160	(64.946)
TEMP 10 =	528.9320	(69.262)
TEMP 11 =	525.2090	(65.539)
TEMP 12 =	525.5690	(65.899)
TEMP 13 =	525.3680	(65.698)
TEMP 14 =	524.3160	(64.646)
TEMP 15 =	525.0240	(65.354)
TEMP 16 =	524.3610	(64.691)
TEMP 17 =	524.6350	(64.965)
TEMP 18 =	524.0780	(64.408)

PRES 1 =	65.4216	(132545.0)
PRES 2 =	65.4190	(66583.0)

VPRS 1 =	.2111	(54.637)
VPRS 2 =	.2145	(55.076)
VPRS 3 =	.2100	(54.490)
VPRS 4 =	.2094	(54.417)
VPRS 5 =	.2195	(55.714)
VPRS 6 =	.2115	(54.689)

SUMMARY OF CORRECTED DATA

TIME = 1400

DATE = 115

TEMPERATURE (DEGREES R.) =	525.3203
CORRECTED PRESSURE (PSIA) =	65.2081
VAPOR PRESSURE (PSIA) =	.2123
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	670093.1

SUMMARY OF MEASURED DATA AT 1415 115

TEMP	1	=	525.2730	(	65.603)
TEMP	2	=	524.7760	(	65.106)
TEMP	3	=	523.2610	(	65.591)
TEMP	4	=	529.9260	(	70.256)
TEMP	5	=	528.0880	(	68.418)
TEMP	6	=	525.0920	(	65.422)
TEMP	7	=	524.7770	(	65.107)
TEMP	8	=	524.3270	(	64.657)
TEMP	9	=	524.5250	(	64.915)
TEMP	10	=	529.2860	(	69.616)
TEMP	11	=	525.2660	(	65.596)
TEMP	12	=	525.6260	(	65.956)
TEMP	13	=	525.2900	(	65.620)
TEMP	14	=	524.3650	(	64.695)
TEMP	15	=	525.0350	(	65.365)
TEMP	16	=	524.3940	(	64.724)
TEMP	17	=	524.6740	(	65.004)
TEMP	18	=	524.1320	(	64.462)

PRES	1	=	65.4265	(132555.0)
PRES	2	=	65.4239	(66588.0)

VPRS	1	=	.2113	(54.666)
VPRS	2	=	.2151	(55.152)
VPRS	3	=	.2090	(54.368)
VPRS	4	=	.2093	(54.403)
VPRS	5	=	.2203	(55.815)
VPRS	6	=	.2119	(54.744)

SUMMARY OF CORRECTED DATA

TIME = 1415

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.3749
CORRECTED PRESSURE (PSIA)	=	65.2129
VAPOR PRESSURE (PSIA)	=	.2124
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670072.8

SUMMARY OF MEASURED DATA AT 1430 115

TEMP	1	=	525.3080	(	65.638)
TEMP	2	=	524.7990	(	65.129)
TEMP	3	=	525.2790	(	65.609)
TEMP	4	=	529.9700	(	70.300)
TEMP	5	=	528.1530	(	68.483)
TEMP	6	=	525.1540	(	65.484)
TEMP	7	=	524.8140	(	65.144)
TEMP	8	=	524.3910	(	64.721)
TEMP	9	=	524.6020	(	64.932)
TEMP	10	=	529.1860	(	69.516)
TEMP	11	=	525.3010	(	65.631)
TEMP	12	=	525.6550	(	65.985)
TEMP	13	=	525.4960	(	65.826)
TEMP	14	=	524.4480	(	64.778)
TEMP	15	=	525.0900	(	65.420)
TEMP	16	=	524.4290	(	64.759)
TEMP	17	=	524.7060	(	65.036)
TEMP	18	=	524.1650	(	64.495)

PRES	1	=	65.4309	(	132564.0)
PRES	2	=	65.4288	(	66593.0)

VPRS	1	=	.2119	(	54.736)
VPRS	2	=	.2149	(	55.131)
VPRS	3	=	.2101	(	54.509)
VPRS	4	=	.2096	(	54.444)
VPRS	5	=	.2201	(	55.787)
VPRS	6	=	.2119	(	54.745)

SUMMARY OF CORRECTED DATA

TIME = 1430

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.4183
CORRECTED PRESSURE (PSIA)	=	65.2172
VAPOR PRESSURE (PSIA)	=	.2127
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670062.1

SUMMARY OF MEASURED DATA AT 1445 115

TEMP 1 =	525.3490	(65.679)
TEMP 2 =	524.8150	(65.145)
TEMP 3 =	525.7990	(65.629)
TEMP 4 =	530.0200	(70.350)
TEMP 5 =	528.1720	(68.502)
TEMP 6 =	525.1790	(65.509)
TEMP 7 =	524.8520	(65.182)
TEMP 8 =	524.4800	(64.810)
TEMP 9 =	524.6860	(65.016)
TEMP 10 =	528.9670	(69.297)
TEMP 11 =	525.3430	(65.673)
TEMP 12 =	525.6680	(65.998)
TEMP 13 =	523.5130	(65.843)
TEMP 14 =	524.4800	(64.810)
TEMP 15 =	525.1420	(65.472)
TEMP 16 =	524.4860	(64.816)
TEMP 17 =	524.7540	(65.084)
TEMP 18 =	524.2280	(64.558)

PRES 1 =	65.4359	(132574.0)
PRES 2 =	65.4328	(66597.0)

VPRS 1 =	.2121	(54.765)
VPRS 2 =	.2155	(55.204)
VPRS 3 =	.2099	(54.483)
VPRS 4 =	.2097	(54.458)
VPRS 5 =	.2201	(55.790)
VPRS 6 =	.2121	(54.771)

SUMMARY OF CORRECTED DATA

TIME = 1445

DATE = 115

TEMPERATURE (DEGREES R.) =	525.4448
CORRECTED PRESSURE (PSIA) =	65.2215
VAPOR PRESSURE (PSIA) =	.2129
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	670072.1

SUMMARY OF MEASURED DATA AT 1500 115

TEMP	1	=	525.3600	(	65.690)
TEMP	2	=	524.8670	(	65.197)
TEMP	3	=	525.2840	(	65.614)
TEMP	4	=	530.0640	(	70.394)
TEMP	5	=	528.2140	(	68.544)
TEMP	6	=	525.1920	(	65.522)
TEMP	7	=	524.8720	(	65.202)
TEMP	8	=	524.4680	(	64.798)
TEMP	9	=	524.6610	(	64.991)
TEMP	10	=	529.2590	(	69.589)
TEMP	11	=	525.4150	(	65.745)
TEMP	12	=	525.6850	(	66.015)
TEMP	13	=	525.6240	(	65.954)
TEMP	14	=	524.5100	(	64.840)
TEMP	15	=	525.1510	(	65.481)
TEMP	16	=	524.5090	(	64.839)
TEMP	17	=	524.7930	(	65.123)
TEMP	18	=	524.2370	(	64.567)

PRES	1	=	65.4403	(	132583.0)
PRES	2	=	65.4357	(	66600.0)

VPRS	1	=	.2127	(	54.847)
VPRS	2	=	.2153	(	55.183)
VPRS	3	=	.2100	(	54.498)
VPRS	4	=	.2100	(	54.498)
VPRS	5	=	.2207	(	55.854)
VPRS	6	=	.2124	(	54.811)

SUMMARY OF CORRECTED DATA

TIME = 1500

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.4811
CORRECTED PRESSURE (PSIA)	=	65.2249
VAPOR PRESSURE (PSIA)	=	.2131
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670061.1

SUMMARY OF MEASURED DATA AT 1515 115

TEMP 1	=	525.4040	(	65.734)
TEMP 2	=	524.8900	(	65.220)
TEMP 3	=	525.3560	(	65.686)
TEMP 4	=	530.0840	(	70.414)
TEMP 5	=	528.1970	(	68.527)
TEMP 6	=	525.2640	(	65.594)
TEMP 7	=	524.9250	(	65.255)
TEMP 8	=	524.5120	(	64.842)
TEMP 9	=	524.7510	(	65.081)
TEMP 10	=	529.3840	(	69.714)
TEMP 11	=	525.3830	(	65.713)
TEMP 12	=	525.7460	(	66.076)
TEMP 13	=	525.5190	(	65.849)
TEMP 14	=	524.5470	(	64.877)
TEMP 15	=	525.2080	(	65.538)
TEMP 16	=	524.5670	(	64.897)
TEMP 17	=	524.8290	(	65.159)
TEMP 18	=	524.2950	(	64.625)

PRES 1	=	55.4438	(132590.0)
PRES 2	=	65.4406	(66605.0)

VPRS 1	=	.2123	(54.786)
VPRS 2	=	.2158	(55.241)
VPRS 3	=	.2105	(54.563)
VPRS 4	=	.2099	(54.486)
VPRS 5	=	.2206	(55.845)
VPRS 6	=	.2123	(54.791)

SUMMARY OF CORRECTED DATA

TIM = 1515

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.5179
CORRECTED PRESSURE (PSIA)	=	65.2290
VAPOR PRESSURE (PSIA)	=	.2132
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670056.4

SUMMARY OF MEASURED DATA AT 1530 115

TEMP	1	=	525.4530	(	65.783)
TEMP	2	=	524.9570	(	65.287)
TEMP	3	=	525.4110	(	65.741)
TEMP	4	=	530.1870	(	70.517)
TEMP	5	=	528.3130	(	68.643)
TEMP	6	=	525.3430	(	65.673)
TEMP	7	=	524.9340	(	65.264)
TEMP	8	=	524.5040	(	64.834)
TEMP	9	=	524.7820	(	65.112)
TEMP	10	=	529.2970	(	69.627)
TEMP	11	=	525.4810	(	65.811)
TEMP	12	=	525.7400	(	66.070)
TEMP	13	=	525.5540	(	65.884)
TEMP	14	=	524.6380	(	64.968)
TEMP	15	=	525.2120	(	65.542)
TEMP	16	=	524.5940	(	64.924)
TEMP	17	=	524.8670	(	65.197)
TEMP	18	=	524.3520	(	64.682)

PRES	1	=	65.4482	(	132599.0)
PRES	2	=	65.4446	(	66609.0)

VPRS	1	=	.2127	(	54.849)
VPRS	2	=	.2160	(	55.264)
VPRS	3	=	.2101	(	54.507)
VPRS	4	=	.2106	(	54.570)
VPRS	5	=	.2205	(	55.833)
VPRS	6	=	.2123	(	54.789)

SUMMARY OF CORRECTED DATA

TIME = 1530

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.5656
CORRECTED PRESSURE (PSIA)	=	65.2331
VAPOR PRESSURE (PSIA)	=	.2133
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670037.6

SUMMARY OF MEASURED DATA AT 1545 115

TEMP	1	=	525.4750	(	65.805)
TEMP	2	=	524.9510	(	65.281)
TEMP	3	=	525.5050	(	65.835)
TEMP	4	=	530.2250	(	70.555)
TEMP	5	=	528.3280	(	68.658)
TEMP	6	=	525.3300	(	65.660)
TEMP	7	=	524.9730	(	65.303)
TEMP	8	=	524.5730	(	64.903)
TEMP	9	=	524.8890	(	65.219)
TEMP	10	=	529.3990	(	69.729)
TEMP	11	=	525.4820	(	65.812)
TEMP	12	=	525.8120	(	66.142)
TEMP	13	=	525.8070	(	66.137)
TEMP	14	=	524.5480	(	64.878)
TEMP	15	=	525.2690	(	65.599)
TEMP	16	=	524.6050	(	64.935)
TEMP	17	=	524.8990	(	65.229)
TEMP	18	=	524.3550	(	64.685)

PRES	1	=	65.4532	(132609.0)
PRES	2	=	65.4485	(66613.0)

VPRS	1	=	.2125	(54.814)
VPRS	2	=	.2160	(55.262)
VPRS	3	=	.2106	(54.574)
VPRS	4	=	.2107	(54.579)
VPRS	5	=	.2207	(55.864)
VPRS	6	=	.2126	(54.827)

SUMMARY OF CORRECTED DATA

TIME = 1545

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.6027
CORRECTED PRESSURE (PSIA)	=	65.2374
VAPOR PRESSURE (PSIA)	=	.2134
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670034.6

SUMMARY OF MEASURED DATA AT 1600 115

TEMP	1	=	525.5140	(	65.844)
TEMP	2	=	524.9920	(	65.322)
TEMP	3	=	525.5330	(	65.863)
TEMP	4	=	530.9140	(	71.244)
TEMP	5	=	528.3620	(	68.692)
TEMP	6	=	525.3140	(	65.644)
TEMP	7	=	525.0120	(	65.342)
TEMP	8	=	524.5910	(	64.921)
TEMP	9	=	524.8290	(	65.159)
TEMP	10	=	529.4830	(	69.813)
TEMP	11	=	525.4910	(	65.821)
TEMP	12	=	525.8210	(	66.151)
TEMP	13	=	525.8060	(	66.136)
TEMP	14	=	524.6020	(	64.932)
TEMP	15	=	525.3300	(	65.660)
TEMP	16	=	524.6340	(	64.964)
TEMP	17	=	524.9420	(	65.272)
TEMP	18	=	524.4160	(	64.746)

PRES	1	=	65.4571	(132617.0)
PRES	2	=	65.4524	(66617.0)

VPRS	1	=	.2127	(54.843)
VPRS	2	=	.2158	(55.247)
VPRS	3	=	.2110	(54.628)
VPRS	4	=	.2105	(54.554)
VPRS	5	=	.2217	(55.986)
VPRS	6	=	.2123	(54.795)

SUMMARY OF CORRECTED DATA

TIME = 1600

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.6318
CORRECTED PRESSURE (PSIA)	=	65.2412
VAPOR PRESSURE (PSIA)	=	.2135
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670036.5

SUMMARY OF MEASURED DATA AT 1615 115

TEMP 1	=	525.5220	(	65.852)
TEMP 2	=	525.0530	(	65.383)
TEMP 3	=	525.5510	(	65.881)
TEMP 4	=	531.5490	(	71.879)
TEMP 5	=	528.3680	(	68.698)
TEMP 6	=	525.3780	(	65.708)
TEMP 7	=	525.0600	(	65.390)
TEMP 8	=	524.6200	(	64.950)
TEMP 9	=	524.9890	(	65.319)
TEMP 10	=	529.5700	(	69.900)
TEMP 11	=	525.5110	(	65.841)
TEMP 12	=	525.8240	(	66.154)
TEMP 13	=	525.8530	(	66.183)
TEMP 14	=	524.6160	(	64.946)
TEMP 15	=	525.2870	(	65.617)
TEMP 16	=	524.6720	(	65.002)
TEMP 17	=	524.9540	(	65.284)
TEMP 18	=	524.4320	(	64.762)

PRES 1	=	65.4611	(132625.0)
PRES 2	=	65.4553	(66620.0)

VPRS 1	=	.2124	(54.808)
VPRS 2	=	.2166	(55.349)
VPRS 3	=	.2115	(54.692)
VPRS 4	=	.2110	(54.617)
VPRS 5	=	.2220	(56.021)
VPRS 6	=	.2128	(54.852)

SUMMARY OF CORRECTED DATA

TIME = 1615

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.6635
CORRECTED PRESSURE (PSIA)	=	65.2443
VAPOR PRESSURE (PSIA)	=	.2139
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670027.6

SUMMARY OF MEASURED DATA AT 1630 115

TEMP	1	=	525.5600	(	65.890)
TEMP	2	=	525.0340	(	65.364)
TEMP	3	=	525.5140	(	65.844)
TEMP	4	=	531.5020	(	71.832)
TEMP	5	=	528.3750	(	68.705)
TEMP	6	=	525.3910	(	65.721)
TEMP	7	=	525.0530	(	65.383)
TEMP	8	=	524.6600	(	64.990)
TEMP	9	=	524.8630	(	65.193)
TEMP	10	=	529.4020	(	69.732)
TEMP	11	=	525.5660	(	65.896)
TEMP	12	=	525.8940	(	66.224)
TEMP	13	=	525.6640	(	65.994)
TEMP	14	=	524.7070	(	65.037)
TEMP	15	=	525.3460	(	65.676)
TEMP	16	=	524.7040	(	65.034)
TEMP	17	=	525.0020	(	65.332)
TEMP	18	=	524.4550	(	64.785)

PRES	1	=	65.4645	(132632.0)
PRES	2	=	65.4583	(66623.0)

VPRS	1	=	.2131	(	54.890)
VPRS	2	=	.2167	(	55.352)
VPRS	3	=	.2117	(	54.718)
VPRS	4	=	.2111	(	53.4)
VPRS	5	=	.2223	(	053)
VPRS	6	=	.2125	(	823)

SUMMARY OF CORRECTED DATA

TIME = 1630

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.6637
CORRECTED PRESSURE (PSIA)	=	65.2473
VAPOR PRESSURE (PSIA)	=	.2141
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670058.4

SUMMARY OF MEASURED DATA AT 1645 115

TEMP 1	=	525.6350	(	65.965)
TEMP 2	=	525.0920	(	65.422)
TEMP 3	=	525.5750	(	65.905)
TEMP 4	=	531.5050	(	71.835)
TEMP 5	=	528.4000	(	68.730)
TEMP 6	=	525.4060	(	65.736)
TEMP 7	=	525.0730	(	65.403)
TEMP 8	=	524.6860	(	65.016)
TEMP 9	=	524.9430	(	65.275)
TEMP 10	=	529.4160	(	69.746)
TEMP 11	=	525.6000	(	65.930)
TEMP 12	=	525.9170	(	66.247)
TEMP 13	=	525.7430	(	66.073)
TEMP 14	=	524.7240	(	65.054)
TEMP 15	=	525.3560	(	65.686)
TEMP 16	=	524.7190	(	65.049)
TEMP 17	=	525.0280	(	65.358)
TEMP 18	=	524.4870	(	64.817)

PRES 1	=	65.4675	(132638.0)
PRES 2	=	65.4622	(66627.0)

VPRS 1	=	.2136	(54.963)
VPRS 2	=	.2165	(55.334)
VPRS 3	=	.2115	(54.690)
VPRS 4	=	.2111	(54.641)
VPRS 5	=	.2211	(55.914)
VPRS 6	=	.2131	(54.901)

SUMMARY OF CORRECTED DATA

TIME = 1645

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.7009
CORRECTED PRESSURE (PSIA)	=	65.2507
VAPOR PRESSURE (PSIA)	=	.2142
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670045.8

SUMMARY OF MEASURED DATA AT 1700 115

TEMP	1	=	525.6590	(	65.989)
TEMP	2	=	525.1080	(	65.438)
TEMP	3	=	525.6180	(	65.948)
TEMP	4	=	531.5350	(	71.865)
TEMP	5	=	528.4530	(	68.783)
TEMP	6	=	525.4810	(	65.811)
TEMP	7	=	525.1050	(	65.435)
TEMP	8	=	524.7270	(	65.057)
TEMP	9	=	524.8980	(	65.228)
TEMP	10	=	529.5360	(	69.866)
TEMP	11	=	525.6260	(	65.956)
TEMP	12	=	525.9110	(	66.241)
TEMP	13	=	525.9780	(	66.308)
TEMP	14	=	524.7930	(	65.123)
TEMP	15	=	525.4180	(	65.748)
TEMP	16	=	524.7710	(	65.101)
TEMP	17	=	525.0610	(	65.391)
TEMP	18	=	524.5070	(	64.837)

PRES	1	=	65.4709	(132645.0)
PRES	2	=	65.4652	(66630.0)

VPRS	1	=	.2132	(54.902)
VPRS	2	=	.2172	(55.413)
VPRS	3	=	.2114	(54.679)
VPRS	4	=	.2111	(54.634)
VPRS	5	=	.2225	(56.079)
VPRS	6	=	.2135	(54.951)

SUMMARY OF CORRECTED DATA

TIME = 1700

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.7510
CORRECTED PRESSURE (PSIA)	=	65.2537
VAPOR PRESSURE (PSIA)	=	.2143
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670012.9

SUMMARY OF MEASURED DATA AT 1715 115

TEMP	1	=	525.6330	(	65.963)
TEMP	2	=	525.1850	(	65.515)
TEMP	3	=	525.6500	(	65.980)
TEMP	4	=	531.5220	(	71.852)
TEMP	5	=	528.4760	(	68.806)
TEMP	6	=	525.5070	(	65.837)
TEMP	7	=	525.1680	(	65.498)
TEMP	8	=	524.7540	(	65.084)
TEMP	9	=	525.0760	(	65.406)
TEMP	10	=	529.2450	(	69.575)
TEMP	11	=	525.6520	(	65.982)
TEMP	12	=	525.9900	(	66.320)
TEMP	13	=	525.8410	(	66.171)
TEMP	14	=	524.7880	(	65.118)
TEMP	15	=	525.4640	(	65.794)
TEMP	16	=	524.7940	(	65.124)
TEMP	17	=	525.0860	(	65.416)
TEMP	18	=	524.5390	(	64.869)

PRES	1	=	65.4744	(132652.0)
PRES	2	=	65.4681	(66633.0)

VPRS	1	=	.2137	(	54.972)
VPRS	2	=	.2173	(	55.433)
VPRS	3	=	.2122	(	54.776)
VPRS	4	=	.2118	(	54.721)
VPRS	5	=	.2227	(	56.106)
VPRS	6	=	.2131	(	54.895)

SUMMARY OF CORRECTED DATA

TIME = 1715

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.7635
CORRECTED PRESSURE (PSIA)	=	65.2566
VAPOR PRESSURE (PSIA)	=	.2147
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670026.4

SUMMARY OF MEASURED DATA AT 1730 115

TEMP	1	=	525.6940	(	66.024)
TEMP	2	=	525.1430	(	65.473)
TEMP	3	=	525.6610	(	65.991)
TEMP	4	=	531.5320	(	71.862)
TEMP	5	=	528.5050	(	68.835)
TEMP	6	=	525.4990	(	65.829)
TEMP	7	=	525.1790	(	65.509)
TEMP	8	=	524.7360	(	65.066)
TEMP	9	=	525.1340	(	65.464)
TEMP	10	=	529.5900	(	69.920)
TEMP	11	=	525.6940	(	66.024)
TEMP	12	=	525.9780	(	66.308)
TEMP	13	=	525.8450	(	66.175)
TEMP	14	=	524.8020	(	65.132)
TEMP	15	=	525.4720	(	65.802)
TEMP	16	=	524.8220	(	65.152)
TEMP	17	=	525.1180	(	65.448)
TEMP	18	=	524.5870	(	64.917)

PRES	1	=	65.4783	(132660.0)
PRES	2	=	65.4740	(66639.0)

VPRS	1	=	.2139	(54.997)
VPRS	2	=	.2171	(55.400)
VPRS	3	=	.2124	(54.811)
VPRS	4	=	.2117	(54.713)
VPRS	5	=	.2225	(56.085)
VPRS	6	=	.2134	(54.931)

SUMMARY OF CORRECTED DATA

TIME = 1730

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.7916
CORRECTED PRESSURE (PSIA)	=	65.2614
VAPOR PRESSURE (PSIA)	=	.2147
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670040.4

SUMMARY OF MEASURED DATA AT 1745 115

TEMP 1	=	525.7450	(	66.075)
TEMP 2	=	525.2080	(	65.538)
TEMP 3	=	525.6120	(	65.942)
TEMP 4	=	531.4620	(	71.792)
TEMP 5	=	528.5370	(	68.867)
TEMP 6	=	525.5130	(	65.843)
TEMP 7	=	525.1860	(	65.516)
TEMP 8	=	524.7880	(	65.118)
TEMP 9	=	525.1080	(	65.438)
TEMP 10	=	529.5640	(	69.894)
TEMP 11	=	525.7080	(	66.038)
TEMP 12	=	526.0380	(	66.368)
TEMP 13	=	525.9220	(	66.252)
TEMP 14	=	524.8520	(	65.182)
TEMP 15	=	525.5100	(	65.840)
TEMP 16	=	524.8400	(	65.170)
TEMP 17	=	525.1480	(	65.478)
TEMP 18	=	524.6030	(	64.933)

PRES 1	=	65.4808	(	132665.0)
PRES 2	=	65.4769	(	66642.0)

VPRS 1	=	.2140	(	55.014)
VPRS 2	=	.2174	(	55.442)
VPRS 3	=	.2117	(	54.713)
VPRS 4	=	.2118	(	54.731)
VPRS 5	=	.2228	(	56.115)
VPRS 6	=	.2138	(	54.980)

SUMMARY OF CORRECTED DATA

TIME = 1745

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.8163
CORRECTED PRESSURE (PSIA)	=	65.2641
VAPOR PRESSURE (PSIA)	=	.2148
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670036.4

SUMMARY OF MEASURED DATA AT 1800 115

TEMP 1	=	525.7430	(	66.073)
TEMP 2	=	525.2150	(	65.545)
TEMP 3	=	525.7020	(	66.032)
TEMP 4	=	531.5000	(	71.830)
TEMP 5	=	528.5390	(	68.869)
TEMP 6	=	525.5720	(	65.902)
TEMP 7	=	525.2400	(	65.570)
TEMP 8	=	524.8220	(	65.152)
TEMP 9	=	525.1560	(	65.486)
TEMP 10	=	529.4510	(	69.781)
TEMP 11	=	525.7540	(	66.084)
TEMP 12	=	526.0250	(	66.355)
TEMP 13	=	526.0360	(	66.366)
TEMP 14	=	524.9410	(	65.271)
TEMP 15	=	525.5200	(	65.850)
TEMP 16	=	524.8700	(	65.200)
TEMP 17	=	525.1740	(	65.504)
TEMP 18	=	524.6520	(	64.982)

PRES 1	=	65.4833	(132670.0)
PRES 2	=	65.4789	(66644.0)

VPRS 1	=	.2145	(55.072)
VPRS 2	=	.2173	(55.427)
VPRS 3	=	.2125	(54.821)
VPRS 4	=	.2117	(54.719)
VPRS 5	=	.2232	(56.166)
VPRS 6	=	.2137	(54.978)

SUMMARY OF CORRECTED DATA

TIME = 1800

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.8492
CORRECTED PRESSURE (PSIA)	=	65.2660
VAPOR PRESSURE (PSIA)	=	.2150
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670014.3

SUMMARY OF MEASURED DATA AT 1815 115

TEMP	1	=	525.7570	(	66.087)
TEMP	2	=	525.2690	(	65.599)
TEMP	3	=	525.7740	(	66.104)
TEMP	4	=	531.4930	(	71.823)
TEMP	5	=	528.5740	(	68.904)
TEMP	6	=	525.5690	(	65.899)
TEMP	7	=	525.2780	(	65.608)
TEMP	8	=	524.8230	(	65.153)
TEMP	9	=	525.0840	(	65.414)
TEMP	10	=	529.8040	(	70.134)
TEMP	11	=	525.8210	(	66.151)
TEMP	12	=	526.0740	(	66.404)
TEMP	13	=	525.8650	(	66.195)
TEMP	14	=	524.8730	(	65.203)
TEMP	15	=	525.5360	(	65.866)
TEMP	16	=	524.9010	(	65.231)
TEMP	17	=	525.2090	(	65.539)
TEMP	18	=	524.6660	(	64.996)

PRES	1	=	65.4867	(	132677.0)
PRES	2	=	65.4818	(	66647.0)

VPRS	1	=	.2140	(	55.015)
VPRS	2	=	.2175	(	55.458)
VPRS	3	=	.2125	(	54.814)
VPRS	4	=	.2121	(	54.762)
VPRS	5	=	.2232	(	56.164)
VPRS	6	=	.2137	(	54.978)

SUMMARY OF CORRECTED DATA

TIME = 1815

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.8803
CORRECTED PRESSURE (PSIA)	=	65.2693
VAPOR PRESSURE (PSIA)	=	.2150
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670007.8

SUMMARY OF MEASURED DATA AT 1830 115

TEMP 1 =	525.7580	(66.088)
TEMP 2 =	525.2910	(65.621)
TEMP 3 =	525.7660	(66.096)
TEMP 4 =	531.4150	(71.745)
TEMP 5 =	528.6190	(68.949)
TEMP 6 =	525.6130	(65.943)
TEMP 7 =	525.2910	(65.621)
TEMP 8 =	524.8720	(65.202)
TEMP 9 =	525.2520	(65.582)
TEMP 10 =	529.7410	(70.071)
TEMP 11 =	525.8040	(66.134)
TEMP 12 =	526.0800	(66.410)
TEMP 13 =	526.0010	(66.331)
TEMP 14 =	524.8980	(65.128)
TEMP 15 =	525.5980	(65.908)
TEMP 16 =	524.9180	(65.213)
TEMP 17 =	525.2140	(65.554)
TEMP 18 =	524.6900	(65.020)

PRES 1 =	65.4192	(132682.0)
PRES 2 =	65.4818	(66649.0)

VPRS 1 =	.2142	(55.041)
VPRS 2 =	.2179	(55.503)
VPRS 3 =	.2129	(54.866)
VPRS 4 =	.2122	(54.780)
VPRS 5 =	.2233	(56.178)
VPRS 6 =	.2143	(55.044)

SUMMARY OF CORRECTED DATA

TIME = 1830

DATE = 115

TEMPERATURE (DEGREES R.) =	525.9061
CORRECTED PRESSURE (PSIA) =	65.2712
VAPOR PRESSURE (PSIA) =	.2153
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669994.4

SUMMARY OF MEASURED DATA AT 1845 115

TEMP 1 =	525.8010	(66.131)
TEMP 2 =	525.2840	(65.614)
TEMP 3 =	525.7430	(66.073)
TEMP 4 =	531.0320	(71.362)
TEMP 5 =	528.6240	(68.954)
TEMP 6 =	525.6550	(65.985)
TEMP 7 =	525.2930	(65.623)
TEMP 8 =	524.8920	(65.222)
TEMP 9 =	525.1430	(65.473)
TEMP 10 =	529.7230	(70.053)
TEMP 11 =	525.8260	(66.156)
TEMP 12 =	526.1030	(66.433)
TEMP 13 =	526.0620	(66.392)
TEMP 14 =	525.0370	(65.367)
TEMP 15 =	525.5890	(65.919)
TEMP 16 =	524.9600	(65.290)
TEMP 17 =	525.2580	(65.588)
TEMP 18 =	524.7010	(65.031)

PRES 1 =	65.4931	(132690.0)
PRES 2 =	65.4877	(66653.0)

VPRS 1 =	.2149	(55.127)
VPRS 2 =	.2180	(55.519)
VPRS 3 =	.2130	(54.879)
VPRS 4 =	.2126	(54.826)
VPRS 5 =	.2229	(56.135)
VPRS 6 =	.2139	(55.001)

SUMMARY OF CORRECTED DATA

TIME = 1845

DATE = 115

TEMPERATURE (DEGREES R.) =	525.9234
CORRECTED PRESSURE (PSIA) =	65.2749
VAPOR PRESSURE (PSIA) =	.2155
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	670011.3

SUMMARY OF MEASURED DATA AT 1900 115

TEMP 1 =	525.8030	(66.133)
TEMP 2 =	525.3430	(65.673)
TEMP 3 =	525.7710	(66.101)
TEMP 4 =	531.1220	(71.452)
TEMP 5 =	528.6410	(68.971)
TEMP 6 =	525.6760	(66.006)
TEMP 7 =	525.3300	(65.660)
TEMP 8 =	524.8760	(65.206)
TEMP 9 =	525.2120	(65.542)
TEMP 10 =	529.7150	(70.045)
TEMP 11 =	525.8770	(66.207)
TEMP 12 =	526.1020	(66.432)
TEMP 13 =	526.0240	(66.354)
TEMP 14 =	525.0350	(65.365)
TEMP 15 =	525.6300	(65.960)
TEMP 16 =	524.9770	(65.307)
TEMP 17 =	525.2840	(65.614)
TEMP 18 =	524.7320	(65.062)

PRES 1 =	65.4946	(132693.0)
PRES 2 =	65.4897	(66655.0)

VPRS 1 =	.2142	(55.040)
VPRS 2 =	.2181	(55.537)
VPRS 3 =	.2127	(54.844)
VPRS 4 =	.2129	(54.863)
VPRS 5 =	.2238	(56.242)
VPRS 6 =	.2146	(55.082)

SUMMARY OF CORRECTED DATA

TIME = 1900

DATE = 115

TEMPERATURE (DEGREES R.) =	525.9442
CORRECTED PRESSURE (PSIA) =	65.2766
VAPOR PRESSURE (PSIA) =	.2155
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	670002.2

SUMMARY OF MEASURED DATA AT 1915 115

TEMP 1 =	525.8410	(66.171)
TEMP 2 =	525.3310	(65.661)
TEMP 3 =	525.8440	(66.174)
TEMP 4 =	531.0640	(71.394)
TEMP 5 =	528.6910	(69.021)
TEMP 6 =	525.7110	(66.044)
TEMP 7 =	525.3450	(65.675)
TEMP 8 =	524.9440	(63.274)
TEMP 9 =	525.2400	(65.570)
TEMP 10 =	529.9580	(70.288)
TEMP 11 =	525.8850	(66.215)
TEMP 12 =	526.1490	(66.479)
TEMP 13 =	526.1400	(66.470)
TEMP 14 =	525.0320	(65.362)
TEMP 15 =	525.6520	(65.982)
TEMP 16 =	525.0020	(65.332)
TEMP 17 =	525.3100	(65.640)
TEMP 18 =	524.7560	(65.086)

PRES 1 =	65.4981	(132700.0)
PRES 2 =	65.4926	(66658.0)

VPRS 1 =	.2149	(55.122)
VPRS 2 =	.2184	(55.572)
VPRS 3 =	.2133	(54.916)
VPRS 4 =	.2129	(54.869)
VPRS 5 =	.2233	(56.185)
VPRS 6 =	.2147	(55.096)

SUMMARY OF CORRECTED DATA

TIME = 1915

DATE = 115

TEMPERATURE (DEGREES R.) =	525.9882
CORRECTED PRESSURE (PSIA) =	65.2795
VAPOR PRESSURE (PSIA) =	.2158
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669975.9

SUMMARY OF MEASURED DATA AT 1930 115

TEMP	1	=	525.8500	(	66.180)
TEMP	2	=	525.3860	(	65.716)
TEMP	3	=	525.8710	(	66.201)
TEMP	4	=	530.9950	(	71.325)
TEMP	5	=	528.7250	(	69.055)
TEMP	6	=	525.6990	(	66.029)
TEMP	7	=	525.3740	(	65.704)
TEMP	8	=	524.9730	(	65.303)
TEMP	9	=	525.2050	(	65.535)
TEMP	10	=	529.5790	(	69.909)
TEMP	11	=	525.9370	(	66.267)
TEMP	12	=	526.1770	(	66.507)
TEMP	13	=	526.1550	(	66.485)
TEMP	14	=	525.0460	(	65.376)
TEMP	15	=	525.6420	(	65.972)
TEMP	16	=	525.0350	(	65.365)
TEMP	17	=	525.3280	(	65.658)
TEMP	18	=	524.8080	(	65.138)

PRES	1	=	65.5010	(132706.0)
PRES	2	=	65.4956	(66661.0)

VPRS	1	=	.2149	(55.125)
VPRS	2	=	.2184	(55.572)
VPRS	3	=	.2129	(54.875)
VPRS	4	=	.2127	(54.844)
VPRS	5	=	.2245	(56.327)
VPRS	6	=	.2147	(55.101)

SUMMARY OF CORRECTED DATA

TIME = 1930

DATE = 115

TEMPERATURE (DEGREES R.)	=	525.9948
CORRECTED PRESSURE (PSIA)	=	65.2825
VAPOR PRESSURE (PSIA)	=	.2158
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669997.5

SUMMARY OF MEASURED DATA AT 1945 115

TEMP	1	=	525.8680	(	66.198)
TEMP	2	=	525.3910	(	65.721)
TEMP	3	=	525.9450	(	66.275)
TEMP	4	=	530.9360	(	71.266)
TEMP	5	=	528.7160	(	69.046)
TEMP	6	=	525.7720	(	66.102)
TEMP	7	=	525.4200	(	65.750)
TEMP	8	=	525.0140	(	65.344)
TEMP	9	=	525.3220	(	65.652)
TEMP	10	=	529.6430	(	69.973)
TEMP	11	=	525.9340	(	66.264)
TEMP	12	=	526.2190	(	66.549)
TEMP	13	=	526.1980	(	66.528)
TEMP	14	=	525.0310	(	65.361)
TEMP	15	=	525.6960	(	66.026)
TEMP	16	=	525.0520	(	65.382)
TEMP	17	=	525.3490	(	65.679)
TEMP	18	=	524.8260	(	65.156)

PRES	1	=	65.5035	(	132711.0)
PRES	2	=	65.4985	(	66664.0)

VPRS	1	=	.2153	(	55.175)
VPRS	2	=	.2183	(	55.564)
VPRS	3	=	.2136	(	54.965)
VPRS	4	=	.2134	(	54.931)
VPRS	5	=	.2244	(	56.315)
VPRS	6	=	.2151	(	55.152)

SUMMARY OF CORRECTED DATA

TIME = 1945

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.0272
CORRECTED PRESSURE (PSIA)	=	65.2848
VAPOR PRESSURE (PSIA)	=	.2162
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669980.4

SUMMARY OF MEASURED DATA AT 2000 115

TEMP	1	=	525.8710	(	66.201)
TEMP	2	=	525.4440	(	65.774)
TEMP	3	=	525.9050	(	66.235)
TEMP	4	=	530.9460	(	71.276)
TEMP	5	=	528.7400	(	69.070)
TEMP	6	=	525.7480	(	66.078)
TEMP	7	=	525.4270	(	65.757)
TEMP	8	=	525.0290	(	65.359)
TEMP	9	=	525.2750	(	65.605)
TEMP	10	=	529.2630	(	69.593)
TEMP	11	=	525.9200	(	66.250)
TEMP	12	=	526.1930	(	66.523)
TEMP	13	=	526.2710	(	66.601)
TEMP	14	=	525.1270	(	65.457)
TEMP	15	=	525.7020	(	66.032)
TEMP	16	=	525.0860	(	65.416)
TEMP	17	=	525.3820	(	65.712)
TEMP	18	=	524.8430	(	65.173)

PRES	1	=	65.5060	(	132716.0)
PRES	2	=	65.5005	(	66666.0)

VPRS	1	=	.2155	(	55.209)
VPRS	2	=	.2186	(	55.595)
VPRS	3	=	.2129	(	54.872)
VPRS	4	=	.2134	(	54.934)
VPRS	5	=	.2239	(	56.262)
VPRS	6	=	.2150	(	55.133)

SUMMARY OF CORRECTED DATA

TIME = 2000

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.0228
CORRECTED PRESSURE (PSIA)	=	65.2872
VAPOR PRESSURE (PSIA)	=	.2161
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670010.0

SUMMARY OF MEASURED DATA AT 2015 115

TEMP	1	=	525.9310	(	66.261)
TEMP	2	=	525.4180	(	65.748)
TEMP	3	=	525.9420	(	66.272)
TEMP	4	=	530.8640	(	71.194)
TEMP	5	=	528.7580	(	69.088)
TEMP	6	=	525.7830	(	66.113)
TEMP	7	=	525.4320	(	65.762)
TEMP	8	=	525.0180	(	65.348)
TEMP	9	=	525.3510	(	65.681)
TEMP	10	=	529.5670	(	69.897)
TEMP	11	=	525.9690	(	66.299)
TEMP	12	=	526.2150	(	66.545)
TEMP	13	=	526.0940	(	66.424)
TEMP	14	=	525.1360	(	65.466)
TEMP	15	=	525.7310	(	66.061)
TEMP	16	=	525.0920	(	65.422)
TEMP	17	=	525.4000	(	65.730)
TEMP	18	=	524.8610	(	65.191)

PRES	1	=	65.5089	(132722.0)
PRES	2	=	65.5034	(66669.0)

VPRS	1	=	.2157	(55.226)
VPRS	2	=	.2186	(55.592)
VPRS	3	=	.2137	(54.968)
VPRS	4	=	.2132	(54.911)
VPRS	5	=	.2238	(56.248)
VPRS	6	=	.2155	(55.204)

SUMMARY OF CORRECTED DATA

TIME = 2015

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.0476
CORRECTED PRESSURE (PSIA)	=	65.2898
VAPOR PRESSURE (PSIA)	=	.2163
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	670006.0

SUMMARY OF MEASURED DATA AT 2030 115

TEMP	1	=	525.9510	(	66.281)
TEMP	2	=	525.4470	(	65.777)
TEMP	3	=	525.9860	(	66.316)
TEMP	4	=	530.8620	(	71.192)
TEMP	5	=	528.8090	(	69.139)
TEMP	6	=	525.8120	(	66.142)
TEMP	7	=	525.4760	(	65.806)
TEMP	8	=	525.0310	(	65.361)
TEMP	9	=	525.2910	(	65.621)
TEMP	10	=	529.9130	(	70.243)
TEMP	11	=	525.9610	(	66.291)
TEMP	12	=	526.2670	(	66.597)
TEMP	13	=	526.1320	(	66.462)
TEMP	14	=	525.1530	(	65.483)
TEMP	15	=	525.7630	(	66.093)
TEMP	16	=	525.1130	(	65.443)
TEMP	17	=	525.4140	(	65.744)
TEMP	18	=	524.8960	(	65.226)

PRES	1	=	65.5109	(132726.0)
PRES	2	=	65.5054	(66671.0)

VPRS	1	=	.2158	(55.241)
VPRS	2	=	.2189	(55.639)
VPRS	3	=	.2140	(55.017)
VPRS	4	=	.2132	(54.907)
VPRS	5	=	.2238	(56.247)
VPRS	6	=	.2154	(55.188)

SUMMARY OF CORRECTED DATA

TIME = 2030

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.0881
CORRECTED PRESSURE (PSIA)	=	65.2916
VAPOR PRESSURE (PSIA)	=	.2165
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669972.9

SUMMARY OF MEASURED DATA AT 2045 115

TEMP	1	=	525.9660	(	66.296)
TEMP	2	=	525.4700	(	65.800)
TEMP	3	=	525.9720	(	66.302)
TEMP	4	=	530.8660	(	71.196)
TEMP	5	=	528.7830	(	69.113)
TEMP	6	=	525.8260	(	66.156)
TEMP	7	=	525.5040	(	65.834)
TEMP	8	=	525.0810	(	65.411)
TEMP	9	=	525.3170	(	65.647)
TEMP	10	=	529.7910	(	70.121)
TEMP	11	=	526.0480	(	66.378)
TEMP	12	=	526.2590	(	66.589)
TEMP	13	=	526.2190	(	66.549)
TEMP	14	=	525.1570	(	65.487)
TEMP	15	=	525.8090	(	66.139)
TEMP	16	=	525.1250	(	65.455)
TEMP	17	=	525.4470	(	65.777)
TEMP	18	=	524.9120	(	65.242)

PRES	1	=	65.5129	(	132730.0)
PRES	2	=	65.5074	(	66673.0)

VPRS	1	=	.2162	(	55.297)
VPRS	2	=	.2193	(	55.690)
VPRS	3	=	.2148	(	55.110)
VPRS	4	=	.2136	(	54.960)
VPRS	5	=	.2242	(	56.294)
VPRS	6	=	.2156	(	55.215)

SUMMARY OF CORRECTED DATA

TIME = 2045

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.1037
CORRECTED PRESSURE (PSIA)	=	65.2932
VAPOR PRESSURE (PSIA)	=	.2170
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669968.7

SUMMARY OF MEASURED DATA AT 2100 115

TEMP	1	=	525.9950	(	66.325)
TEMP	2	=	525.4870	(	65.817)
TEMP	3	=	525.9920	(	66.322)
TEMP	4	=	530.7600	(	71.090)
TEMP	5	=	528.7830	(	69.113)
TEMP	6	=	525.8440	(	66.174)
TEMP	7	=	525.5110	(	65.841)
TEMP	8	=	525.0370	(	65.367)
TEMP	9	=	525.3540	(	65.684)
TEMP	10	=	530.0190	(	70.349)
TEMP	11	=	526.0030	(	66.333)
TEMP	12	=	526.2880	(	66.618)
TEMP	13	=	526.1990	(	66.529)
TEMP	14	=	525.2340	(	65.564)
TEMP	15	=	525.8180	(	66.148)
TEMP	16	=	525.1540	(	65.484)
TEMP	17	=	525.4640	(	65.794)
TEMP	18	=	524.9390	(	65.269)

PRES	1	=	65.5149	(	132734.0)
PRES	2	=	65.5093	(	66675.0)

VPRS	1	=	.2155	(	55.201)
VPRS	2	=	.2193	(	55.688)
VPRS	3	=	.2139	(	55.004)
VPRS	4	=	.2138	(	54.989)
VPRS	5	=	.2247	(	56.361)
VPRS	6	=	.2153	(	55.174)

SUMMARY OF CORRECTED DATA

TIME = 2100

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.1230
CORRECTED PRESSURE (PSIA)	=	65.2955
VAPOR PRESSURE (PSIA)	=	.2166
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669967.7

SUMMARY OF MEASURED DATA AT 2115 115

TEMP	1	=	526.0040	(	66.334)
TEMP	2	=	525.5280	(	65.858)
TEMP	3	=	526.0290	(	66.359)
TEMP	4	=	530.7210	(	71.051)
TEMP	5	=	528.8330	(	69.163)
TEMP	6	=	525.8680	(	66.198)
TEMP	7	=	525.4990	(	65.829)
TEMP	8	=	525.0730	(	65.403)
TEMP	9	=	525.4110	(	65.741)
TEMP	10	=	530.0520	(	70.382)
TEMP	11	=	526.0220	(	66.352)
TEMP	12	=	526.3340	(	66.664)
TEMP	13	=	526.1440	(	66.474)
TEMP	14	=	525.2270	(	65.557)
TEMP	15	=	525.8440	(	66.174)
TEMP	16	=	525.1760	(	65.506)
TEMP	17	=	525.4900	(	65.820)
TEMP	18	=	524.9540	(	65.284)

PRES	1	=	65.5173	(132739.0)
PRES	2	=	65.5113	(66677.0)

VPRS	1	=	.2164	(55.319)
VPRS	2	=	.2194	(55.700)
VPRS	3	=	.2144	(55.061)
VPRS	4	=	.2137	(54.978)
VPRS	5	=	.2256	(56.463)
VPRS	6	=	.2159	(55.259)

SUMMARY OF CORRECTED DATA

TIME = 2115

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.1453
CORRECTED PRESSURE (PSIA)	=	65.2972
VAPOR PRESSURE (PSIA)	=	.2171
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669957.0

SUMMARY OF MEASURED DATA AT 2130 115

TEMP	1	=	526.0220	(	66.352)
TEMP	2	=	525.5340	(	65.864)
TEMP	3	=	526.0730	(	66.403)
TEMP	4	=	530.6790	(	71.009)
TEMP	5	=	528.8940	(	69.224)
TEMP	6	=	525.8930	(	66.223)
TEMP	7	=	525.5450	(	65.875)
TEMP	8	=	525.0950	(	65.425)
TEMP	9	=	525.3420	(	65.672)
TEMP	10	=	530.1030	(	70.433)
TEMP	11	=	526.0770	(	66.407)
TEMP	12	=	526.3200	(	66.650)
TEMP	13	=	526.3310	(	66.661)
TEMP	14	=	525.2230	(	65.553)
TEMP	15	=	525.8670	(	66.197)
TEMP	16	=	525.2030	(	65.533)
TEMP	17	=	525.5020	(	65.832)
TEMP	18	=	524.9800	(	65.310)

PRES	1	=	65.5193	(	132743.0)
PRES	2	=	65.5132	(	66679.0)

VPRS	1	=	.2158	(	55.236)
VPRS	2	=	.2195	(	55.703)
VPRS	3	=	.2145	(	55.076)
VPRS	4	=	.2139	(	55.003)
VPRS	5	=	.2249	(	56.378)
VPRS	6	=	.2158	(	55.235)

SUMMARY OF CORRECTED DATA

TIME = 2130

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.1796
CORRECTED PRESSURE (PSIA)	=	65.2993
VAPOR PRESSURE (PSIA)	=	.2169
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669935.3

SUMMARY OF MEASURED DATA AT 2145 115

TEMP 1	=	526.0290	(	66.359)
TEMP 2	=	525.5160	(	65.846)
TEMP 3	=	526.0860	(	66.416)
TEMP 4	=	530.6920	(	71.022)
TEMP 5	=	528.9000	(	69.230)
TEMP 6	=	525.9060	(	66.236)
TEMP 7	=	525.5830	(	65.913)
TEMP 8	=	525.1860	(	65.516)
TEMP 9	=	525.4790	(	65.809)
TEMP 10	=	529.8770	(	70.207)
TEMP 11	=	526.0910	(	66.421)
TEMP 12	=	526.4280	(	66.758)
TEMP 13	=	526.3280	(	66.658)
TEMP 14	=	525.2530	(	65.583)
TEMP 15	=	525.8440	(	66.174)
TEMP 16	=	525.2260	(	65.556)
TEMP 17	=	525.5300	(	65.860)
TEMP 18	=	525.0050	(	65.335)

PRES 1	=	65.5218	(132748.0)
PRES 2	=	65.5162	(66682.0)

VPRS 1	=	.2166	(55.340)
VPRS 2	=	.2196	(55.722)
VPRS 3	=	.2150	(55.142)
VPRS 4	=	.2144	(55.061)
VPRS 5	=	.2255	(56.459)
VPRS 6	=	.2158	(55.247)

SUMMARY OF CORRECTED DATA

TIME = 2145

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.1902
CORRECTED PRESSURE (PSIA)	=	65.3016
VAPOR PRESSURE (PSIA)	=	.2174
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669945.2

SUMMARY OF MEASURED DATA AT 2200 115

TEMP	1	=	526.0610	(	66.391)
TEMP	2	=	525.5510	(	65.881)
TEMP	3	=	526.1200	(	66.450)
TEMP	4	=	530.6960	(	71.026)
TEMP	5	=	528.9170	(	69.247)
TEMP	6	=	525.9050	(	66.235)
TEMP	7	=	525.5840	(	65.914)
TEMP	8	=	525.1470	(	65.477)
TEMP	9	=	525.4850	(	65.815)
TEMP	10	=	529.9480	(	70.278)
TEMP	11	=	526.1110	(	66.441)
TEMP	12	=	526.3820	(	66.712)
TEMP	13	=	526.3630	(	66.693)
TEMP	14	=	525.2700	(	65.600)
TEMP	15	=	525.8940	(	66.224)
TEMP	16	=	525.2290	(	65.559)
TEMP	17	=	525.5480	(	65.878)
TEMP	18	=	525.0180	(	65.348)

PRES	1	=	65.5237	(132752.0)
PRES	2	=	65.5172	(66683.0)

VPRS	1	=	.2163	(55.302)
VPRS	2	=	.2196	(55.722)
VPRS	3	=	.2148	(55.116)
VPRS	4	=	.2141	(55.026)
VPRS	5	=	.2257	(56.475)
VPRS	6	=	.2160	(55.264)

SUMMARY OF CORRECTED DATA

TIME = 2200

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2078
CORRECTED PRESSURE (PSIA)	=	65.3032
VAPOR PRESSURE (PSIA)	=	.2173
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669939.0

SUMMARY OF MEASURED DATA AT 2215 115

TEMP	1	=	526.0670	(	66.397)
TEMP	2	=	525.5810	(	65.911)
TEMP	3	=	526.1090	(	66.439)
TEMP	4	=	530.6290	(	70.959)
TEMP	5	=	528.8900	(	69.220)
TEMP	6	=	525.9540	(	66.284)
TEMP	7	=	525.6130	(	65.943)
TEMP	8	=	525.1650	(	65.495)
TEMP	9	=	525.5370	(	65.867)
TEMP	10	=	529.9520	(	70.282)
TEMP	11	=	526.1580	(	66.488)
TEMP	12	=	526.3920	(	66.722)
TEMP	13	=	526.2090	(	66.539)
TEMP	14	=	525.2470	(	65.577)
TEMP	15	=	525.8990	(	66.229)
TEMP	16	=	525.2440	(	65.574)
TEMP	17	=	525.5780	(	65.908)
TEMP	18	=	525.0170	(	65.347)

PRES	1	=	65.5252	(132755.0)
PRES	2	=	65.5191	(66685.0)

VPRS	1	=	.2169	(	55.375)
VPRS	2	=	.2199	(	55.755)
VPRS	3	=	.2153	(	55.177)
VPRS	4	=	.2147	(	55.104)
VPRS	5	=	.2251	(	56.407)
VPRS	6	=	.2164	(	55.319)

SUMMARY OF CORRECTED DATA

TIME = 2215

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2142
CORRECTED PRESSURE (PSIA)	=	65.3046
VAPOR PRESSURE (PSIA)	=	.2176
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669944.6

SUMMARY OF MEASURED DATA AT 2230 115

TEMP	1	=	526.0830	(	66.413)
TEMP	2	=	525.6230	(	65.953)
TEMP	3	=	526.1230	(	66.453)
TEMP	4	=	530.6490	(	70.979)
TEMP	5	=	528.9520	(	69.282)
TEMP	6	=	525.9780	(	66.308)
TEMP	7	=	525.6130	(	65.943)
TEMP	8	=	525.1710	(	65.501)
TEMP	9	=	525.4520	(	65.782)
TEMP	10	=	529.5910	(	70.021)
TEMP	11	=	526.1550	(	66.485)
TEMP	12	=	526.4480	(	66.778)
TEMP	13	=	526.2990	(	66.629)
TEMP	14	=	525.2780	(	65.608)
TEMP	15	=	525.9220	(	66.252)
TEMP	16	=	525.2670	(	65.597)
TEMP	17	=	525.5910	(	65.921)
TEMP	18	=	525.0520	(	65.382)

PRES	1	=	65.5272	(132759.0)
PRES	2	=	65.5211	(66687.0)

VPRS	1	=	.2163	(55.310)
VPRS	2	=	.2202	(55.802)
VPRS	3	=	.2155	(55.201)
VPRS	4	=	.2146	(55.094)
VPRS	5	=	.2258	(56.491)
VPRS	6	=	.2161	(55.276)

SUMMARY OF CORRECTED DATA

TIME = 2230

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2266
CORRECTED PRESSURE (PSIA)	=	65.3065
VAPOR PRESSURE (PSIA)	=	.2176
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669949.1

SUMMARY OF MEASURED DATA AT 2245 115

TEMP	1	=	526.0850	(	66.415)
TEMP	2	=	525.5750	(	65.905)
TEMP	3	=	526.1260	(	66.456)
TEMP	4	=	530.5940	(	70.924)
TEMP	5	=	528.9640	(	69.294)
TEMP	6	=	525.9520	(	66.282)
TEMP	7	=	525.6100	(	65.940)
TEMP	8	=	525.2010	(	65.531)
TEMP	9	=	525.4850	(	65.815)
TEMP	10	=	529.9560	(	70.286)
TEMP	11	=	526.1510	(	66.481)
TEMP	12	=	526.4250	(	66.755)
TEMP	13	=	526.3230	(	66.653)
TEMP	14	=	525.3330	(	65.663)
TEMP	15	=	525.9290	(	66.259)
TEMP	16	=	525.2980	(	65.628)
TEMP	17	=	525.6060	(	65.936)
TEMP	18	=	525.0690	(	65.399)

PRES	1	=	65.5297	(132764.0)
PRES	2	=	65.5231	(66689.0)

VPRS	1	=	.2170	(55.394)
VPRS	2	=	.2201	(55.789)
VPRS	3	=	.2155	(55.207)
VPRS	4	=	.2145	(55.072)
VPRS	5	=	.2257	(56.475)
VPRS	6	=	.2166	(55.343)

SUMMARY OF CORRECTED DATA

TIME = 2245

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2405
CORRECTED PRESSURE (PSIA)	=	65.3085
VAPOR PRESSURE (PSIA)	=	.2178
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669952.2

SUMMARY OF MEASURED DATA AT 2300 115

TEMP	1	=	526.1120	(	66.442)
TEMP	2	=	525.6560	(	65.986)
TEMP	3	=	526.1430	(	66.473)
TEMP	4	=	530.6290	(	70.959)
TEMP	5	=	528.9510	(	69.281)
TEMP	6	=	525.9570	(	66.287)
TEMP	7	=	525.6330	(	65.963)
TEMP	8	=	525.2370	(	65.567)
TEMP	9	=	525.5550	(	65.885)
TEMP	10	=	529.3820	(	69.712)
TEMP	11	=	526.1690	(	66.499)
TEMP	12	=	526.4390	(	66.769)
TEMP	13	=	526.3410	(	66.671)
TEMP	14	=	525.3630	(	65.693)
TEMP	15	=	525.9370	(	66.267)
TEMP	16	=	525.3050	(	65.635)
TEMP	17	=	525.6130	(	65.943)
TEMP	18	=	525.0760	(	65.406)

PRES	1	=	65.5312	(132767.0)
PRES	2	=	65.5250	(66691.0)

VPRS	1	=	.2172	(55.423)
VPRS	2	=	.2207	(55.857)
VPRS	3	=	.2153	(55.178)
VPRS	4	=	.2148	(55.110)
VPRS	5	=	.2256	(56.463)
VPRS	6	=	.2163	(55.300)

SUMMARY OF CORRECTED DATA

TIME = 2300

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2372
CORRECTED PRESSURE (PSIA)	=	65.3102
VAPOR PRESSURE (PSIA)	=	.2179
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669973.1

SUMMARY OF MEASURED DATA AT 2315 115

TEMP	1	=	526.0990	(	66.429)
TEMP	2	=	525.6410	(	65.971)
TEMP	3	=	526.1610	(	66.491)
TEMP	4	=	530.9240	(	71.254)
TEMP	5	=	528.9630	(	69.293)
TEMP	6	=	525.9690	(	66.299)
TEMP	7	=	525.6360	(	65.966)
TEMP	8	=	525.2290	(	65.559)
TEMP	9	=	525.5710	(	65.901)
TEMP	10	=	529.5120	(	69.842)
TEMP	11	=	526.1860	(	66.516)
TEMP	12	=	526.5140	(	66.844)
TEMP	13	=	526.4660	(	66.796)
TEMP	14	=	525.3450	(	65.675)
TEMP	15	=	525.9660	(	66.296)
TEMP	16	=	525.3330	(	65.663)
TEMP	17	=	525.6380	(	65.968)
TEMP	18	=	525.0870	(	65.417)

PRES	1	=	65.5326	(132770.0)
PRES	2	=	65.5280	(66694.0)

VPRS	1	=	.2179	(55.505)
VPRS	2	=	.2205	(55.831)
VPRS	3	=	.2157	(55.232)
VPRS	4	=	.2149	(55.122)
VPRS	5	=	.2258	(56.489)
VPRS	6	=	.2167	(55.355)

SUMMARY OF CORRECTED DATA

TIME = 2315

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2553
CORRECTED PRESSURE (PSIA)	=	65.3121
VAPOR PRESSURE (PSIA)	=	.2182
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669969.8

SUMMARY OF MEASURED DATA AT 2330 115

TEMP	1	=	526.1400	(	66.470)
TEMP	2	=	525.6560	(	65.986)
TEMP	3	=	526.1750	(	66.505)
TEMP	4	=	530.9620	(	71.292)
TEMP	5	=	528.9610	(	69.291)
TEMP	6	=	526.0070	(	66.337)
TEMP	7	=	525.6490	(	65.979)
TEMP	8	=	525.2820	(	65.612)
TEMP	9	=	525.4960	(	65.826)
TEMP	10	=	529.6660	(	69.996)
TEMP	11	=	526.1830	(	66.513)
TEMP	12	=	526.4560	(	66.786)
TEMP	13	=	526.5090	(	66.839)
TEMP	14	=	525.3690	(	65.699)
TEMP	15	=	525.9670	(	66.297)
TEMP	16	=	525.3360	(	65.666)
TEMP	17	=	525.6650	(	65.995)
TEMP	18	=	525.1400	(	65.470)

PRES	1	=	65.5326	(132770.0)
PRES	2	=	65.5280	(66694.0)

VPRS	1	=	.2171	(55.400)
VPRS	2	=	.2201	(55.789)
VPRS	3	=	.2161	(55.275)
VPRS	4	=	.2151	(55.148)
VPRS	5	=	.2257	(56.483)
VPRS	6	=	.2169	(55.378)

SUMMARY OF CORRECTED DATA

TIME = 2330

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.2793
CORRECTED PRESSURE (PSIA)	=	65.3122
VAPOR PRESSURE (PSIA)	=	.2181
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669940.7

SUMMARY OF MEASURED DATA AT 2345 115

TEMP 1	=	526.1670	(	66.497)
TEMP 2	=	525.7170	(	66.047)
TEMP 3	=	526.2440	(	66.574)
TEMP 4	=	530.9140	(	71.244)
TEMP 5	=	529.0380	(	69.368)
TEMP 6	=	526.0090	(	66.339)
TEMP 7	=	525.6990	(	66.029)
TEMP 8	=	525.2590	(	65.589)
TEMP 9	=	525.6270	(	65.957)
TEMP 10	=	529.9740	(	70.304)
TEMP 11	=	526.2100	(	66.540)
TEMP 12	=	526.5120	(	66.842)
TEMP 13	=	526.4680	(	66.798)
TEMP 14	=	525.3270	(	65.657)
TEMP 15	=	526.0000	(	66.330)
TEMP 16	=	525.3490	(	65.679)
TEMP 17	=	525.6740	(	66.004)
TEMP 18	=	525.1310	(	65.461)

PRES 1	=	65.5326	(132770.0)
PRES 2	=	65.5280	(66694.3)

VPRS 1	=	.2169	(55.387)
VPRS 2	=	.2207	(55.862)
VPRS 3	=	.2155	(55.209)
VPRS 4	=	.2147	(55.098)
VPRS 5	=	.2256	(56.469)
VPRS 6	=	.2172	(55.413)

SUMMARY OF CORRECTED DATA

TIME = 2345

DATE = 115

TEMPERATURE (DEGREES R.)	=	526.3201
CORRECTED PRESSURE (PSIA)	=	65.3122
VAPOR PRESSURE (PSIA)	=	.2181
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669888.8

SUMMARY OF MEASURED DATA AT 0 116

TEMP 1 =	526.1950	(66.525)
TEMP 2 =	525.7030	(66.033)
TEMP 3 =	526.2670	(66.597)
TEMP 4 =	530.8750	(71.205)
TEMP 5 =	529.0760	(69.406)
TEMP 6 =	526.0300	(66.360)
TEMP 7 =	525.7050	(66.035)
TEMP 8 =	525.2990	(65.629)
TEMP 9 =	525.5630	(65.893)
TEMP 10 =	530.1670	(70.497)
TEMP 11 =	526.2450	(66.575)
TEMP 12 =	526.4970	(66.827)
TEMP 13 =	526.4480	(66.778)
TEMP 14 =	525.3920	(65.722)
TEMP 15 =	526.0270	(66.357)
TEMP 16 =	525.3720	(65.702)
TEMP 17 =	525.6960	(66.026)
TEMP 18 =	525.1790	(65.509)

PRES 1 =	65.5331	(132771.0)
PRES 2 =	65.5280	(66694.0)

VPRS 1 =	.2177	(55.487)
VPRS 2 =	.2204	(55.828)
VPRS 3 =	.2154	(55.195)
VPRS 4 =	.2152	(55.166)
VPRS 5 =	.2262	(56.544)
VPRS 6 =	.2173	(55.427)

SUMMARY OF CORRECTED DATA

TIME = 0

DATE = 116

TEMPERATURE (DEGREES R.) =	526.3477
CORRECTED PRESSURE (PSIA) =	65.3123
VAPOR PRESSURE (PSIA) =	.2183
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669854.2

SUMMARY OF MEASURED DATA AT 15 116

TEMP 1	=	526.1950	(	66.525)
TEMP 2	=	525.6930	(	66.023)
TEMP 3	=	526.3310	(	66.661)
TEMP 4	=	530.9190	(	71.249)
TEMP 5	=	529.0160	(	69.346)
TEMP 6	=	526.0030	(	66.333)
TEMP 7	=	525.7050	(	66.035)
TEMP 8	=	525.3170	(	65.647)
TEMP 9	=	525.5680	(	65.898)
TEMP 10	=	530.1250	(	70.455)
TEMP 11	=	526.2570	(	66.587)
TEMP 12	=	526.5530	(	66.883)
TEMP 13	=	526.4740	(	66.804)
TEMP 14	=	525.4430	(	65.773)
TEMP 15	=	526.0480	(	66.378)
TEMP 16	=	525.3940	(	65.724)
TEMP 17	=	525.7110	(	66.041)
TEMP 18	=	525.1720	(	65.502)

PRES 1	=	65.5346	(132774.0)
PRES 2	=	65.5280	(66694.0)

VPRS 1	=	.2175	(55.462)
VPRS 2	=	.2206	(55.853)
VPRS 3	=	.2162	(55.297)
VPRS 4	=	.2153	(55.172)
VPRS 5	=	.2259	(56.507)
VPRS 6	=	.2169	(55.387)

SUMMARY OF CORRECTED DATA

TIME = 15

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.3516
CORRECTED PRESSURE (PSIA)	=	65.3129
VAPOR PRESSURE (PSIA)	=	.2184
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669855.7

SUMMARY OF MEASURED DATA AT 30 116

TEMP 1 =	526.1610	(66.491)
TEMP 2 =	525.7320	(66.062)
TEMP 3 =	526.3110	(66.641)
TEMP 4 =	530.9200	(71.250)
TEMP 5 =	529.0540	(69.384)
TEMP 6 =	526.0880	(66.418)
TEMP 7 =	525.7650	(66.095)
TEMP 8 =	525.3570	(65.687)
TEMP 9 =	525.6810	(66.011)
TEMP 10 =	530.2510	(70.581)
TEMP 11 =	526.2760	(66.606)
TEMP 12 =	526.5700	(66.900)
TEMP 13 =	526.5720	(66.902)
TEMP 14 =	525.4690	(65.799)
TEMP 15 =	526.0730	(66.403)
TEMP 16 =	525.4090	(65.739)
TEMP 17 =	525.7370	(66.067)
TEMP 18 =	525.1820	(65.512)

PRES 1 =	65.5346	(132774.0)
PRES 2 =	65.5309	(66697.0)

VPRS 1 =	.2180	(55.519)
VPRS 2 =	.2210	(55.891)
VPRS 3 =	.2158	(55.241)
VPRS 4 =	.2153	(55.177)
VPRS 5 =	.2269	(56.626)
VPRS 6 =	.2171	(55.412)

SUMMARY OF CORRECTED DATA

TIME = 30

DATE = 116

TEMPERATURE (DEGREES R.) =	526.3862
CORRECTED PRESSURE (PSIA) =	65.3142
VAPOR PRESSURE (PSIA) =	.2186
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669824.9

SUMMARY OF MEASURED DATA AT 45 116

TEMP	1	=	525.2070	(	66.537)
TEMP	2	=	525.7540	(	66.084)
TEMP	3	=	526.3000	(	66.630)
TEMP	4	=	530.9450	(	71.275)
TEMP	5	=	529.0360	(	69.366)
TEMP	6	=	526.0850	(	66.415)
TEMP	7	=	525.7510	(	66.081)
TEMP	8	=	525.3170	(	65.647)
TEMP	9	=	525.6760	(	66.006)
TEMP	10	=	530.1870	(	70.517)
TEMP	11	=	526.3050	(	66.635)
TEMP	12	=	526.5750	(	66.905)
TEMP	13	=	526.5320	(	66.862)
TEMP	14	=	525.4650	(	65.795)
TEMP	15	=	526.0910	(	66.421)
TEMP	16	=	525.4290	(	65.759)
TEMP	17	=	525.7550	(	66.085)
TEMP	18	=	525.2110	(	65.541)

PRES	1	=	65.5351	(132775.0)
PRES	2	=	65.5319	(66698.0)

VPRS	1	=	.2181	(55.531)
VPRS	2	=	.2210	(55.897)
VPRS	3	=	.2164	(55.319)
VPRS	4	=	.2157	(55.227)
VPRS	5	=	.2261	(56.521)
VPRS	6	=	.2174	(55.450)

SUMMARY OF CORRECTED DATA

TIME = 45
DATE = 116

TEMPERATURE (DEGREES R.)	=	526.3868
CORRECTED PRESSURE (PSIA)	=	65.3148
VAPOR PRESSURE (PSIA)	=	.2187
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669829.8

SUMMARY OF MEASURED DATA AT 100 116

TEMP	1	=	526.2570	(	66.587)
TEMP	2	=	525.7890	(	66.119)
TEMP	3	=	526.3760	(	66.706)
TEMP	4	=	530.9660	(	71.296)
TEMP	5	=	529.0920	(	69.422)
TEMP	6	=	526.1350	(	66.465)
TEMP	7	=	525.7740	(	66.104)
TEMP	8	=	525.3660	(	65.696)
TEMP	9	=	525.7080	(	66.038)
TEMP	10	=	530.1210	(	70.451)
TEMP	11	=	526.3380	(	66.668)
TEMP	12	=	526.5820	(	66.912)
TEMP	13	=	526.6100	(	66.940)
TEMP	14	=	525.4530	(	65.783)
TEMP	15	=	526.0860	(	66.416)
TEMP	16	=	525.4440	(	65.774)
TEMP	17	=	525.7570	(	66.087)
TEMP	18	=	525.2500	(	65.580)

PRES	1	=	65.5351	(132775.0)
PRES	2	=	65.5319	(66693.0)

VPRS	1	=	.2173	(55.435)
VPRS	2	=	.2213	(55.929)
VPRS	3	=	.2165	(55.328)
VPRS	4	=	.2160	(55.267)
VPRS	5	=	.2267	(56.604)
VPRS	6	=	.2173	(55.430)

SUMMARY OF CORRECTED DATA

TIME = 100

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.4213
CORRECTED PRESSURE (PSIA)	=	65.3148
VAPOR PRESSURE (PSIA)	=	.2187
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669786.3

SUMMARY OF MEASURED DATA AT 115 116

TEMP 1	=	526.2530	(	66.583)
TEMP 2	=	525.8030	(	66.133)
TEMP 3	=	526.3060	(	66.636)
TEMP 4	=	530.9720	(	71.302)
TEMP 5	=	529.0960	(	69.426)
TEMP 6	=	526.1110	(	66.441)
TEMP 7	=	525.7900	(	66.120)
TEMP 8	=	525.3570	(	65.687)
TEMP 9	=	525.6520	(	65.982)
TEMP 10	=	529.7810	(	70.111)
TEMP 11	=	526.3350	(	66.665)
TEMP 12	=	526.6020	(	66.932)
TEMP 13	=	526.5460	(	66.876)
TEMP 14	=	525.4930	(	65.823)
TEMP 15	=	526.1110	(	66.441)
TEMP 16	=	525.4640	(	65.794)
TEMP 17	=	525.7800	(	66.110)
TEMP 18	=	525.2440	(	65.574)

PRES 1	=	65.5361	(132777.0)
PRES 2	=	65.5329	(66699.0)

VPRS 1	=	.2184	(55.574)
VPRS 2	=	.2213	(55.934)
VPRS 3	=	.2170	(55.390)
VPRS 4	=	.2156	(55.221)
VPRS 5	=	.2266	(56.584)
VPRS 6	=	.2178	(55.497)

SUMMARY OF CORRECTED DATA

TIME = 115

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.4009
CORRECTED PRESSURE (PSIA)	=	65.3154
VAPOR PRESSURE (PSIA)	=	.2191
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669818.3

SUMMARY OF MEASURED DATA AT 130 116

TEMP 1	=	526.2700	(	66.600)
TEMP 2	=	525.8160	(	66.146)
TEMP 3	=	526.3080	(	66.638)
TEMP 4	=	530.9600	(	71.290)
TEMP 5	=	529.1340	(	69.464)
TEMP 6	=	526.1510	(	66.481)
TEMP 7	=	525.8190	(	66.149)
TEMP 8	=	525.3660	(	65.696)
TEMP 9	=	525.6670	(	65.997)
TEMP 10	=	530.2280	(	70.558)
TEMP 11	=	526.3470	(	66.677)
TEMP 12	=	526.6460	(	66.976)
TEMP 13	=	526.5670	(	66.897)
TEMP 14	=	525.5070	(	65.837)
TEMP 15	=	526.1310	(	66.461)
TEMP 16	=	525.4840	(	65.814)
TEMP 17	=	525.8130	(	66.143)
TEMP 18	=	525.2790	(	65.609)

PRES 1	=	65.5361	(132777.0)
PRES 2	=	65.5329	(66699.0)

VPRS 1	=	.2185	(55.589)
VPRS 2	=	.2209	(55.880)
VPRS 3	=	.2165	(55.325)
VPRS 4	=	.2156	(55.210)
VPRS 5	=	.2274	(56.687)
VPRS 6	=	.2178	(55.496)

SUMMARY OF CORRECTED DATA

TIME = 130

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.4406
CORRECTED PRESSURE (PSIA)	=	65.3155
VAPOR PRESSURE (PSIA)	=	.2190
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669769.0

SUMMARY OF MEASURED DATA AT 145 116

TEMP 1 =	526.2830	(66.613)
TEMP 2 =	525.8260	(66.156)
TEMP 3 =	526.3810	(66.711)
TEMP 4 =	530.9940	(71.324)
TEMP 5 =	529.1750	(69.505)
TEMP 6 =	526.1460	(66.476)
TEMP 7 =	525.8500	(66.180)
TEMP 8 =	525.3970	(65.727)
TEMP 9 =	525.7390	(66.069)
TEMP 10 =	530.2060	(70.536)
TEMP 11 =	526.4020	(66.732)
TEMP 12 =	526.6570	(66.987)
TEMP 13 =	526.5840	(66.914)
TEMP 14 =	525.5260	(65.856)
TEMP 15 =	526.1610	(66.491)
TEMP 16 =	525.5010	(65.831)
TEMP 17 =	525.8180	(66.148)
TEMP 18 =	525.2980	(65.628)

PRES 1 =	65.5376	(132780.0)
PRES 2 =	65.5329	(66699.0)

VPRS 1 =	.2182	(55.551)
VPRS 2 =	.2217	(55.986)
VPRS 3 =	.2164	(55.314)
VPRS 4 =	.2161	(55.281)
VPRS 5 =	.2268	(56.617)
VPRS 6 =	.2172	(55.413)

SUMMARY OF CORRECTED DATA

TIME = 145
DATE = 116

TEMPERATURE (DEGREES R.) =	526.4658
CORRECTED PRESSURE (PSIA) =	65.3162
VAPOR PRESSURE (PSIA) =	.2190
VOLUME (CU.FT.) =	2000000.0
AIR MASS (IBM) =	669744.4

SUMMARY OF MEASURED DATA AT 200 116

TEMP	1	=	526.2730	(	66.603)
TEMP	2	=	523.8270	(	66.157)
TEMP	3	=	526.3920	(	66.722)
TEMP	4	=	531.0200	(	71.350)
TEMP	5	=	529.1840	(	69.314)
TEMP	6	=	526.2120	(	66.542)
TEMP	7	=	525.0610	(	66.191)
TEMP	8	=	525.4290	(	65.759)
TEMP	9	=	525.7630	(	66.093)
TEMP	10	=	530.3300	(	70.660)
TEMP	11	=	526.3720	(	66.702)
TEMP	12	=	526.6450	(	66.975)
TEMP	13	=	526.8010	(	67.131)
TEMP	14	=	525.5590	(	65.889)
TEMP	15	=	526.1580	(	66.488)
TEMP	16	=	525.5250	(	65.855)
TEMP	17	=	525.8360	(	66.166)
TEMP	18	=	525.2950	(	65.625)

PRES	1	=	65.5381	(132781.0)
PRES	2	=	65.5339	(66700.0)

VPRS	1	=	.2188	(55.624)
VPRS	2	=	.2219	(56.010)
VPRS	3	=	.2166	(55.346)
VPRS	4	=	.2162	(55.296)
VPRS	5	=	.2269	(56.629)
VPRS	6	=	.2181	(55.534)

SUMMARY OF CORRECTED DATA

TIME = 200

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.4916
CORRECTED PRESSURE (PSIA)	=	65.3166
VAPOR PRESSURE (PSIA)	=	.2194
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669715.1

SUMMARY OF MEASURED DATA AT 215 116

TEMP	1	=	526.3370	(	66.667)
TEMP	2	=	525.8640	(	66.194)
TEMP	3	=	526.4360	(	66.766)
TEMP	4	=	531.0180	(	71.348)
TEMP	5	=	529.1860	(	69.516)
TEMP	6	=	526.2020	(	66.532)
TEMP	7	=	525.8650	(	66.195)
TEMP	8	=	525.5040	(	65.834)
TEMP	9	=	525.7390	(	66.069)
TEMP	10	=	530.3830	(	70.713)
TEMP	11	=	526.4310	(	66.761)
TEMP	12	=	526.7040	(	67.034)
TEMP	13	=	526.6040	(	66.934)
TEMP	14	=	525.5130	(	65.843)
TEMP	15	=	526.1900	(	66.520)
TEMP	16	=	525.5230	(	65.853)
TEMP	17	=	525.8560	(	66.186)
TEMP	18	=	525.3340	(	65.664)

PRES	1	=	65.5381	(132781.0)
PRES	2	=	65.5339	(66700.0)

VPRS	1	=	.2183	(55.557)
VPRS	2	=	.2219	(56.004)
VPRS	3	=	.2170	(55.394)
VPRS	4	=	.2163	(55.302)
VPRS	5	=	.2269	(56.625)
VPRS	6	=	.2180	(55.516)

SUMMARY OF CORRECTED DATA

TIME = 215

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.5094
CORRECTED PRESSURE (PSIA)	=	65.3167
VAPOR PRESSURE (PSIA)	=	.2193
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	639693.1

SUMMARY OF MEASURED DATA AT 230 116

TEMP 1 =	526.3210	(66.651)
TEMP 2 =	525.8680	(66.198)
TEMP 3 =	526.4340	(66.764)
TEMP 4 =	531.0610	(71.391)
TEMP 5 =	529.1960	(69.526)
TEMP 6 =	526.1980	(66.528)
TEMP 7 =	525.8880	(66.218)
TEMP 8 =	525.4410	(65.771)
TEMP 9 =	525.8190	(66.149)
TEMP 10 =	530.3160	(70.646)
TEMP 11 =	526.3950	(66.725)
TEMP 12 =	526.7240	(67.054)
TEMP 13 =	526.8040	(67.134)
TEMP 14 =	525.6610	(65.991)
TEMP 15 =	526.2150	(66.545)
TEMP 16 =	525.5520	(65.882)
TEMP 17 =	525.8800	(66.210)
TEMP 18 =	525.3490	(65.679)

PRES 1 =	65.5395	(132784.0)
PRES 2 =	65.5348	(66701.0)

VPRS 1 =	.2183	(55.561)
VPRS 2 =	.2217	(55.989)
VPRS 3 =	.2178	(55.497)
VPRS 4 =	.2162	(55.296)
VPRS 5 =	.2275	(56.695)
VPRS 6 =	.2182	(55.546)

SUMMARY OF CORRECTED DATA

TIME = 230

DATE = 116

TEMPERATURE (DEGREES R.) =	526.5222
CORRECTED PRESSURE (PSIA) =	65.3176
VAPOR PRESSURE (PSIA) =	.2196
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669687.0

SUMMARY OF MEASURED DATA AT 245 116

TEMP	1	=	526.3610	(	66.691)
TEMP	2	=	525.9220	(	66.252)
TEMP	3	=	526.3860	(	66.716)
TEMP	4	=	531.0490	(	71.379)
TEMP	5	=	529.2470	(	69.577)
TEMP	6	=	526.2700	(	66.600)
TEMP	7	=	525.9170	(	66.247)
TEMP	8	=	525.4900	(	65.820)
TEMP	9	=	525.7540	(	66.084)
TEMP	10	=	529.9160	(	70.246)
TEMP	11	=	526.4250	(	66.755)
TEMP	12	=	526.6970	(	67.027)
TEMP	13	=	526.6540	(	66.984)
TEMP	14	=	525.6120	(	65.942)
TEMP	15	=	526.2280	(	66.558)
TEMP	16	=	525.5750	(	65.905)
TEMP	17	=	525.9160	(	66.246)
TEMP	18	=	525.3920	(	65.722)

PRES	1	=	65.5395	(132784.0)
PRES	2	=	65.5348	(66701.0)

VPRS	1	=	.2186	(55.590)
VPRS	2	=	.2217	(55.981)
VPRS	3	=	.2169	(55.387)
VPRS	4	=	.2160	(55.265)
VPRS	5	=	.2273	(56.675)
VPRS	6	=	.2180	(55.523)

SUMMARY OF CORRECTED DATA

TIME = 245

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.5223
CORRECTED PRESSURE (PSIA)	=	66.3179
VAPOR PRESSURE (PSIA)	=	.2193
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669689.0

SUMMARY OF MEASURED DATA AT 300 116

TEMP	1	=	526.3750	(	66.705)
TEMP	2	=	525.9380	(	66.268)
TEMP	3	=	526.4150	(	66.745)
TEMP	4	=	531.0650	(	71.395)
TEMP	5	=	529.2540	(	69.584)
TEMP	6	=	526.2830	(	66.613)
TEMP	7	=	525.9220	(	66.252)
TEMP	8	=	525.5110	(	65.841)
TEMP	9	=	525.7630	(	66.093)
TEMP	10	=	529.9130	(	70.243)
TEMP	11	=	526.4450	(	66.775)
TEMP	12	=	526.7440	(	67.074)
TEMP	13	=	526.7290	(	67.059)
TEMP	14	=	525.6810	(	66.011)
TEMP	15	=	526.2390	(	66.569)
TEMP	16	=	525.5910	(	65.921)
TEMP	17	=	525.9170	(	66.247)
TEMP	18	=	525.4070	(	65.737)

PRES	1	=	65.5400	(132785.0)
PRLS	2	=	65.5368	(66703.0)

VPRS	1	=	.2189	(55.629)
VPRS	2	=	.2221	(56.031)
VPRS	3	=	.2176	(55.464)
VPRS	4	=	.2165	(55.334)
VPRS	5	=	.2274	(56.687)
VPRS	6	=	.2183	(55.560)

SUMMARY OF CORRECTED DATA

TIME = 300
DATE = 116

TEMPERATURE (DEGREES R.)	=	526.5417
CORRECTED PRESSURE (PSIA)	=	65.3187
VAPOR PRESSURE (PSIA)	=	.2197
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669672.9

SUMMARY OF MEASURED DATA AT 315 116

TEMP 1 =	526.3860	(66.716)
TEMP 2 =	525.9370	(66.267)
TEMP 3 =	526.4830	(66.813)
TEMP 4 =	531.0960	(71.426)
TEMP 5 =	529.2590	(69.589)
TEMP 6 =	526.2890	(66.619)
TEMP 7 =	525.9060	(66.236)
TEMP 8 =	525.5630	(65.893)
TEMP 9 =	525.8640	(66.194)
TEMP 10 =	529.9650	(70.295)
TEMP 11 =	526.4940	(66.824)
TEMP 12 =	526.7550	(67.085)
TEMP 13 =	526.7120	(67.042)
TEMP 14 =	525.6500	(65.980)
TEMP 15 =	526.2500	(66.580)
TEMP 16 =	525.6120	(65.942)
TEMP 17 =	525.9350	(66.265)
TEMP 18 =	525.3860	(65.716)

PRES 1 =	65.5420	(132789.0)
PRES 2 =	65.5368	(66703.0)

VPRS 1 =	.2189	(55.635)
VPRS 2 =	.2223	(56.063)
VPRS 3 =	.2172	(55.423)
VPRS 4 =	.2169	(55.377)
VPRS 5 =	.2283	(56.796)
VPRS 6 =	.2182	(55.551)

SUMMARY OF CORRECTED DATA

TIME = 315

DATE = 116

TEMPERATURE (DEGREES R.) =	526.5590
CORRECTED PRESSURE (PSIA) =	65.3196
VAPOR PRESSURE (PSIA) =	.2198
VOLUME (CU.FT.) =	2000000.0
AIR MASS (LBM) =	669660.2

SUMMARY OF MEASURED DATA AT 330 116

TEMP	1	=	526.3950	(	66.725)
TEMP	2	=	525.9660	(	66.296)
TEMP	3	=	526.4680	(	66.798)
TEMP	4	=	530.9390	(	71.269)
TEMP	5	=	529.3150	(	69.645)
TEMP	6	=	526.2760	(	66.606)
TEMP	7	=	525.9490	(	66.279)
TEMP	8	=	525.5360	(	65.866)
TEMP	9	=	525.9310	(	66.261)
TEMP	10	=	529.8940	(	70.224)
TEMP	11	=	526.5460	(	66.876)
TEMP	12	=	526.7320	(	67.112)
TEMP	13	=	526.6330	(	66.963)
TEMP	14	=	525.7220	(	66.052)
TEMP	15	=	526.2910	(	66.621)
TEMP	16	=	525.6440	(	65.974)
TEMP	17	=	525.9480	(	66.278)
TEMP	18	=	525.4270	(	65.757)

PRES	1	=	65.5430	(	132791.0)
PRES	2	=	65.5378	(	66704.0)

VPRS	1	=	.2192	(	55.673)
VPRS	2	=	.2227	(	56.109)
VPRS	3	=	.2175	(	55.456)
VPRS	4	=	.2168	(	55.369)
VPRS	5	=	.2283	(	56.793)
VPRS	6	=	.2188	(	55.619)

SUMMARY OF CORRECTED DATA

TIME = 330

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.5738
CORRECTED PRESSURE (PSIA)	=	65.3203
VAPOR PRESSURE (PSIA)	=	.2201
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669648.6

SUMMARY OF MEASURED DATA AT 345 116

TEMP	1	=	526.3890	(	66.719)
TEMP	2	=	525.9670	(	66.297)
TEMP	3	=	526.4180	(	66.748)
TEMP	4	=	530.7180	(	71.048)
TEMP	5	=	529.2890	(	69.619)
TEMP	6	=	526.3290	(	66.659)
TEMP	7	=	525.9930	(	66.323)
TEMP	8	=	525.5800	(	65.910)
TEMP	9	=	526.0050	(	66.336)
TEMP	10	=	530.1970	(	70.527)
TEMP	11	=	526.5240	(	66.854)
TEMP	12	=	526.8230	(	67.153)
TEMP	13	=	526.7840	(	67.114)
TEMP	14	=	525.6850	(	66.015)
TEMP	15	=	526.3030	(	66.633)
TEMP	16	=	525.6550	(	65.985)
TEMP	17	=	525.9810	(	66.311)
TEMP	18	=	525.4520	(	65.782)

PRES	1	=	65.5430	(132791.0)
PRES	2	=	65.5378	(66704.0)

VPRS	1	=	.2190	(55.650)
VPRS	2	=	.2224	(56.071)
VPRS	3	=	.2177	(55.484)
VPRS	4	=	.2170	(55.392)
VPRS	5	=	.2279	(56.744)
VPRS	6	=	.2190	(55.641)

SUMMARY OF CORRECTED DATA

TIME = 345

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.5994
CORRECTED PRESSURE (PSIA)	=	65.3203
VAPOR PRESSURE (PSIA)	=	.2201
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669616.5

SUMMARY OF MEASURED DATA AT 400 116

TEMP	1	=	526.4220	(	66.752)
TEMP	2	=	525.9810	(	66.311)
TEMP	3	=	526.4540	(	66.784)
TEMP	4	=	530.6290	(	70.959)
TEMP	5	=	529.3140	(	69.644)
TEMP	6	=	526.3380	(	66.668)
TEMP	7	=	526.0160	(	66.346)
TEMP	8	=	525.6030	(	65.933)
TEMP	9	=	525.9520	(	66.282)
TEMP	10	=	530.4060	(	70.736)
TEMP	11	=	526.6070	(	66.937)
TEMP	12	=	526.8360	(	67.166)
TEMP	13	=	526.8130	(	67.143)
TEMP	14	=	525.6580	(	65.988)
TEMP	15	=	526.3170	(	66.647)
TEMP	16	=	525.6650	(	65.995)
TEMP	17	=	525.9950	(	66.325)
TEMP	18	=	525.4730	(	65.803)

PRES	1	=	65.5440	(132793.0)
PRES	2	=	65.5378	(66704.0)

VPRS	1	=	.2197	(55.732)
VPRS	2	=	.2223	(56.053)
VPRS	3	=	.2176	(55.465)
VPRS	4	=	.2169	(55.380)
VPRS	5	=	.2282	(56.787)
VPRS	6	=	.2187	(55.612)

SUMMARY OF CORRECTED DATA

TIME = 400

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.6290
CORRECTED PRESSURE (PSIA)	=	65.3208
VAPOR PRESSURE (PSIA)	=	.2201
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669583.1

SUMMARY OF MEASURED DATA AT 415 116

TEMP	1	=	526.4730	(	66.803)
TEMP	2	=	525.9900	(	66.320)
TEMP	3	=	526.5290	(	66.859)
TEMP	4	=	530.5850	(	70.915)
TEMP	5	=	529.3060	(	69.636)
TEMP	6	=	526.3320	(	66.662)
TEMP	7	=	526.0350	(	66.365)
TEMP	8	=	525.5940	(	65.924)
TEMP	9	=	526.0040	(	66.334)
TEMP	10	=	530.2060	(	70.536)
TEMP	11	=	526.5870	(	66.917)
TEMP	12	=	526.8560	(	67.186)
TEMP	13	=	526.7910	(	67.121)
TEMP	14	=	525.7290	(	66.059)
TEMP	15	=	526.3320	(	66.662)
TEMP	16	=	525.6930	(	66.023)
TEMP	17	=	526.0160	(	66.346)
TEMP	18	=	525.4730	(	65.803)

PRES	1	=	65.5440	(	132793.0)
PRES	2	=	65.5378	(	66704.0)

VPRS	1	=	.2194	(	55.696)
VPRS	2	=	.2227	(	56.103)
VPRS	3	=	.2174	(	55.445)
VPRS	4	=	.2175	(	55.461)
VPRS	5	=	.2282	(	56.785)
VPRS	6	=	.2191	(	55.665)

SUMMARY OF CORRECTED DATA

TIME = 415

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.6376
CORRECTED PRESSURE (PSIA)	=	65.3206
VAPOR PRESSURE (PSIA)	=	.2202
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669571.1

SUMMARY OF MEASURED DATA AT 430 116

TEMP	1	=	526.4760	(	66.806)
TEMP	2	=	526.0380	(	66.368)
TEMP	3	=	526.5560	(	66.886)
TEMP	4	=	530.5760	(	70.906)
TEMP	5	=	529.3730	(	69.703)
TEMP	6	=	526.3730	(	66.703)
TEMP	7	=	526.0480	(	66.378)
TEMP	8	=	525.6260	(	65.956)
TEMP	9	=	525.9600	(	66.290)
TEMP	10	=	530.4320	(	70.762)
TEMP	11	=	526.5850	(	66.915)
TEMP	12	=	526.8940	(	67.224)
TEMP	13	=	526.8170	(	67.147)
TEMP	14	=	525.7810	(	66.111)
TEMP	15	=	526.3890	(	66.719)
TEMP	16	=	525.7110	(	66.041)
TEMP	17	=	526.0330	(	66.363)
TEMP	18	=	525.5100	(	65.840)

PRES	1	=	65.5450	(	132795.0)
PRES	2	=	65.5397	(	66706.0)

VPRS	1	=	.2197	(	55.729)
VPRS	2	=	.2226	(	56.092)
VPRS	3	=	.2186	(	55.598)
VPRS	4	=	.2171	(	55.410)
VPRS	5	=	.2284	(	56.807)
VPRS	6	=	.2189	(	55.632)

SUMMARY OF CORRECTED DATA

TIME = 430

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.6758
CORRECTED PRESSURE (PSIA)	=	65.3219
VAPOR PRESSURE (PSIA)	=	.2205
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669535.1

SUMMARY OF MEASURED DATA AT 445 116

TEMP 1	=	526.4890	(	66.819)
TEMP 2	=	526.0670	(	66.397)
TEMP 3	=	526.5660	(	66.896)
TEMP 4	=	530.5860	(	70.916)
TEMP 5	=	529.3760	(	69.706)
TEMP 6	=	526.3840	(	66.714)
TEMP 7	=	526.0770	(	66.407)
TEMP 8	=	525.6710	(	66.001)
TEMP 9	=	526.0440	(	66.374)
TEMP 10	=	530.3910	(	70.721)
TEMP 11	=	526.6020	(	66.932)
TEMP 12	=	526.9030	(	67.233)
TEMP 13	=	526.7730	(	67.103)
TEMP 14	=	525.7420	(	66.072)
TEMP 15	=	526.3600	(	66.690)
TEMP 16	=	525.7290	(	66.059)
TEMP 17	=	526.0500	(	66.380)
TEMP 18	=	525.5230	(	65.853)

PRES 1	=	65.5460	(132797.0)
PRES 2	=	65.5407	(66707.0)

VPRS 1	=	.2196	(55.723)
VPRS 2	=	.2230	(56.141)
VPRS 3	=	.2184	(55.575)
VPRS 4	=	.2173	(55.435)
VPRS 5	=	.2282	(56.779)
VPRS 6	=	.2193	(55.679)

SUMMARY OF CORRECTED DATA

TIME = 445

DATE = 116

TEMPERATURE (DEGREES R.)	=	526.6854
CORRECTED PRESSURE (PSIA)	=	65.3228
VAPOR PRESSURE (PSIA)	=	.2206
VOLUME (CU.FT.)	=	2000000.0
AIR MASS (LBM)	=	669532.0

APPENDIX G

Type B and C Leakage Rate Test Results

APPENDIX G

Type B and C Leakage Rate Test Results

A. APPENDIX DESCRIPTION

The following tables list as-found and as-left LLRT results for each penetration. These results are from the Unit 2 1987 and 1989 Refueling Outages (although some tests were performed in 1990 and 1991). All results are in sccm.

B. EXPLANATION OF PENETRATION 50 LLRT ESTIMATE

Note that for penetration 50, the 1989 as-found test was not performed. This error was reported in LER 89-08 (attached). The test value shown in this report is equal to the highest as-found leakage recorded for penetration 50 on Unit 2 since 1982. This value is conservative because the penetration is closed by two flanges which are pushed out during an LLRT, but are in compression during an accident.

1987 LLRT MAXIMUM PATHWAY LEAKAGE

PENETRATION	AS-FOUND	AS-LEFT
1A	1,540	1,102
1B	138	138
1C	11	11
1D	27	27
2A	11,620	240
2B	5,000	1,738
7A	8	8
7B	5	5
8	241	241
9	1,331	1,331
10	1,299	1,299
21-1	46	63
21-2	97	48
22-1	45	214
22-2	47	40
13	17,016	6,806
14	917	1,250
15	308	52
16	58	58
18	52	52
19A	5,500	74
19B	28	28
20A	918	807
20B	257	257
20C	3,740	176
23	102	102
24	20	20
37	101	101
38	10	10

PENETRATION	AS-FOUND	AS-LEFT
39	444	444
41	5,719	238
42	45	407
44	326	326
47A	28	28
47B	30	30
47C	69	69
47D	24	24
48A	2520	63
48B	2,760	1,026
49A	24	24
49B	12	12
49C	14	14
50	159	18
53E	433	433
54W	183	183
55E	227	228
55W	188	188
56E	8	8
56W	9	9
57	4	4
60	5	5
61	208	208
62	152	152
64	240	240
67	11	90
68	3,699	3,699
69	2,312	2,312
	70,334	26,779

1989 LLRT MAXIMUM PATHWAY LEAKAGE

PENETRATION	AS-FOUND	AS-LEFT
1A	11	24
1B	165	216
1C	388	20
1D	80	2
2A	7,550	550
2B	91,190	1,077
7A	3	2
7B	3	2
8	227	1,820
9	382,320	4,030
10	90,624	1,640
21-1	4	96
21-2	2	18
22-1	4	154
22-2	2	98
13	243	486
14	46,345	417
15	49	234
16	35	20
18	569	20
19A	377	1,354
19B	2,080	3
20A	1,064	824
20B	384	53
20C	779	355
23	93	19
24	344	16
37	13,030	20
38	44	2

PENETRATION	AS-FOUND	AS-LEFT
39	1,077	164
41	1,430	477
42	1,421	20
44	229,392	4,720
47A	60	20
47B	65	20
47C	83	20
47D	58	20
48A	419	54
48B	1,440	193
49A	60	20
49B	73	20
49C	58	20
50	160*	53
53E	371	148
54W	112	162
55E	162	225
55W	264	273
56E	22	21
56W	4	18
59	23	50
60	99	6
61	29	886
62	596	1,310
64	118,944	20
67	7	5
68	11,097	3,699
69	1,850	2,774
	1,007,385	28,937

* - Estimated Valve

C. SUMMARY OF MINIMUM PATHWAY IMPROVEMENTS FOR THE 1989 REFUELING OUTAGE

C.1 Definitions - The following definitions are used to be consistent with Calvert Cliffs Instructions.

"As-Found" Leakage - The leakage rate determined during the ILRT before any repairs or adjustments are performed.

"As-Left" Leakage - The leakage rate determined during the ILRT after any repairs or adjustments are performed. As-left and as-found results are the same if no repairs or adjustments are performed during the test.

"End of Cycle" Leakage - The leakage rate determined by adding minimum pathway leakage improvements to the "as-found" test results. This leakage rate is a rough estimate of what leakage might have been if an ILRT was performed immediately after shutdown. This calculation is described in Information Notice 85-71. We are reporting this value without using it as a test limit.

C.2 RESULTS

The 95% UCL test results (in wt %) are shown below:

	<u>Test Result</u>
As-Left	.118
As-Found	.118
End of Cycle	.206

The table on the following page summarizes Local Leak Rate Improvements that have occurred because of repairs or adjustments performed during the 1989 Unit 2 Refueling Outage. These results are minimum pathway leakage results. When totaled the improvements equal 152,512 sccm or .088 wt %/day.

Most of the improvements can be attributed to repairing O-PH-387. An evaluation is being performed to determine if preventive measures should be taken to prevent recurrence of high minimum pathway leakage for O-PH-387.

CALCULATION OF MIN PATH LEAKAGE IMPROVEMENTS 1991

MIN PATH LEAKAGE				
	PEN	BEFORE	AFTER MAINT	IMPROVEMENTS
	2A	3620	313	3307
	7A	2	1	1
	7B	2	1	1
	9	111	2860	0
	10	159	1520	0
	13	122	243	0
	14	23,173	104	23,069
	20A	956	354	602
	20B	119	20	99
	20C	222	22	200
	24	344	16	328
	37	5	20	0
	42	1421	20	1401
	44	1442	874	568
	50	80	27	53
	64	118,944	20	118,924
	67	7	20	0
	68	5549	1850	3699
	69	925	1387	0
S/G Manway	21-1	4	96	0
S/G Manway	21-2	2	18	0
S/G Manway	22-1	4	154	0
S/G Manway	22-2	2	98	0
2ZEB4	53	262	2	260
				152,512 SCCM

LICENSEE EVENT REPORT (LER)

PLANT NAME (1)										DOCKET NUMBER (2)										PAGE (3)																															
Calvert Cliffs Unit 2										0 5 0 0 0 0 0 0 0 0 1										1 OF 0 5																															
TITLE (4)																																																			
Failure to Perform a Local Leak Rate Test																																																			
EVENT DATE (5)										LER NUMBER (6)										REPORT DATE (7)										OTHER FACILITIES INVOLVED (8)																					
MONTH			DAY			YEAR				YEAR			SEQUENT A- NUMBER			PREV. A- NUMBER			MONTH			DAY			YEAR				FACILITY NAMES										DOCKET NUMBER (S)												
0 3			2 7			8 9				8 9			0 0			8			0 0			0 6			0 7			8 9														0 5 0 0 0 0 0 0 0 0 1									
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 3 (Check one or more of the following):																																																			
OPERATING MODE (9)										20 402 (a)										20 405 (a)										50 73 (a) (2) (i) (A)										73 71 (b)											
POWER LEVEL (10)										20 406 (a) (1) (i) (A)										50 36 (a) (1) (i) (A)										50 73 (a) (2) (i) (A)										73 71 (b)											
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										20 406 (a) (1) (i) (A)										50 73 (a) (2) (i) (A)										50 73 (a) (2) (i) (A)										Voluntary											
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LICENSEE CONTACT FOR THIS LER (12)																																																			
NAME										L. S. Larragoite, Licensing Engineer										TELEPHONE NUMBER																															
																				AREA CODE										3 0 1 2 6 0 - 4 9 8 3																					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																			
CAUSE			SYSTEM			COMPONENT				MANUFACTURER			REPORTABLE TO NRC (1)			CAUSE			SYSTEM			COMPONENT				MANUFACTURER			REPORTABLE TO NRC (1)																						
SUPPLEMENTAL REPORT EXPECTED (14)																																																			
YES (If yes, complete expected submission date)										X										EXPECTED SUBMISSION DATE (15)										MONTH DAY YEAR																					
ABSTRACT (Limit to 1400 words) - Approximate: fifteen (15) lines (160-180) - Tel. 118																																																			

On March 27, 1989, while Calvert Cliffs Unit 2 was operating in MODE 5 (0 percent power, < 200 degrees Fahrenheit), the Containment Integrated Leak Rate Test (ILRT) pressurization penetration flanges were removed without first performing a Local Leak Rate Test (LLRT). Therefore the requirement to perform a LLRT on this Type B penetration every 24 months was not met. The cause of the event was that the maintenance package did not explicitly require a LLRT as a prerequisite to maintenance. A review of this penetration's post maintenance history as well as its most recent As Left LLRT showed that although the ability to obtain the data was lost, the penetration would most likely have performed its intended safety function. This event was determined not to be reportable but is being submitted as a voluntary report under The Other category.

Corrective Actions taken or planned include: (1) Training to applicable mechanical supervision, craft, and planners, (2) Maintenance Planners have been provided a condensed list of Type B and C LLRT penetrations, (3) An additional field will be added to the planners worksheet, (4) The specific requirement to perform a LLRT prior to the maintenance will be added to mechanical maintenance work packages for Type B and C penetrations.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Calvert Cliffs Unit 2	0500031889	008	00	00	02	OF 05

TEXT (if more space is required, use additional NRC Form 366A 2/177)

EVENT SUMMARY

On March 27, 1989, while Calvert Cliffs Unit 2 was operating in MODE 5 (0 percent power, less than 200 degrees Fahrenheit), the Containment (E11S NH) Integrated Leak Rate Test (ILRT) Penetration Flanges (E11S NH-PSF) for containment penetration (E11S NH-PEN) number 50 were removed prior to performing a Local Leak Rate Test (LLRT). This test is required by our Surveillance Test Procedure (STP) M-571-2 (Local Leak Rate Test).

The purpose of STP M-571-2 is to ensure that the leakage through Type B and C penetrations, in an accident condition, remains within the requirements of Technical Specification 3.6.1.2 (Containment Leakage). This specification requires a combined leakage rate of less than or equal to 207,600 standard cubic centimeters per minute (sccm) for all penetrations and valves subject to Type B and C tests. The values of the LLRT prior to maintenance are factored into the ILRT to determine total measured containment leakage.

Penetration 50 is categorized as a Type B penetration since it is a flange penetration with a flexatallic gasket seal. Since no local leak rate was taken prior to the flanges disassembly, the surveillance requirement to perform a Type B test at intervals no greater than 24 months was not met for this penetration. The event was discovered on the same date (March 27, 1989) when the technicians, who were going to perform the LLRT, arrived at the worksite and noted the flange in the disassembled state.

DESCRIPTION OF THE ILRT PRESSURIZATION FLANGE

The ILRT Pressurization Flange is a 6 inch nominal diameter flange used for two purposes. First, during maintenance outages, the flange is used to supply air inside containment for various maintenance uses (e.g., pneumatic tools, etc.). This is done by removing the blank flanges, connecting a valved flange onto the containment side penetration and installing a spool piece (E11S NH-RSP) between the flanges outside containment. The second purpose is to use the penetration as the location for admitting air to pressurize the containment for the ILRT (see Figure 1). The flanges use a 6 inch, 150 PSI Flexatallic Gasket.

CAUSE OF THE EVENT

The maintenance on Penetration 50 was anticipated. As such, the maintenance planning schedule showed the LLRT planned for March 27, 1989 and the removal of the flanges planned the next day (March 28, 1989). Contrary to the schedule, on March 27, 1989, the Mechanical Maintenance Supervisor, with appropriate authorization from the tagging authority, directed removal of the penetration flanges in preparation for plant air hook-up to the containment. The maintenance package did not specify that a LLRT had to be performed prior to removing the flanges. Also, the planning schedule was not reviewed prior to authorization by the Mechanical Maintenance Supervisor.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

PLANT NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)				PAGE (3)			
		YEAR	SEQUENCE NUMBER	REVISION NUMBER					
		0 5 0 0 0 3 1 8 8 9	0 0 8	0 0 0 3	OF 0 5				

TEXT (if more space is required, use additional NRC Form 366A (1) (17))

The maintenance work schedule is used as a maintenance outage planning aid. No specific procedure requires work to be performed in the exact order of the schedule. Therefore, the cause of the event was that the planned maintenance package did not require a LLRT as a prerequisite to maintenance.

Local Leak Rate Tests are performed by the Electrical and Control (E&C) Maintenance Shop, whereas the physical work on valve or flanged penetrations is performed by the Mechanical Maintenance Shop. Since the LLRT data must be gathered prior to any maintenance, this pre-maintenance requirement must be stated in the mechanical maintenance work package. The maintenance planner is conscientious, knowledgeable, and aware that containment penetrations require LLRTs prior to maintenance. Review of other similar penetration maintenance packages prepared by the planner showed that the LLRTs were listed as a prerequisite. Failure to include the LLRT in the maintenance package was personnel error, however, no specific process is in place which focuses mechanical maintenance planners to consider the need for a LLRT or require LLRTs as a prerequisite to penetration maintenance. Therefore, the root cause of the event is the limited planning tools available to the mechanical maintenance planners.

ASSESSMENT OF THE SAFETY CONSEQUENCES

Both Integrated and Local Leak Rate Testing of the containment are the methods of ensuring the containment boundary will function as assumed in the accident analyses (i.e., the total containment leakage volume will not exceed 346,000 sccm at the peak accident pressure).

This penetration's leakage history was reviewed. The "As Found" leakage rates (prior to maintenance) and "As Left" leakage rates (following maintenance) are listed below in sccm:

<u>Outage</u>	<u>As Left</u>	<u>Outage</u>	<u>As Found</u>	<u>Net Change Between Outages</u>
Fall 1982	250.0	Spring 1984	128.9	- 121.1
Spring 1984	86.3	Fall 1985	15.3	- 71.0
Fall 1985	239.0	Spring 1987	159.0	- 80.0
Spring 1987	18.2	Spring 1989	Missed	?

The above data shows that this penetration has a history of low leakage. It also shows that during the period between the As Left and As Found LLRTs, no degradation in leakage occurred. In addition, the penetration is a passive component. Following use, the blank flanges are replaced with a new flexatailic gasket and the penetration typically is not used until the next outage. Therefore, based on previous history as well as the Spring 1987 As Left data, this penetration would have been expected to perform its intended safety function.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8-31-88

FACILITY NAME (1): Calvert Cliffs Unit 2	DOCKET NUMBER (2): 0 5 0 0 0 3 1 8 8 9	LER NUMBER (3):				PAGE (3):			
		YEAR	REG. DIST. NO.	REL. ON NO.					
		8 9	— 0 0 8	— 0 0 0 4	OF 0 5				

TEXT (If more space is required, use additional NRC Form 308A's) (17)

ASSESSMENT OF REPORTABILITY

The event occurred during MODE 5. If the penetration was conservatively assumed to have failed at the time the capability to perform an As Found LLRT was lost, the associated LIMITING CONDITIONS and ACTION statements for the Technical Specifications were met. Therefore, this event was not reportable under any of the applicable 10 CFR 50.73 criteria. However, the potential generic issues related to this event are recognized. Therefore, this Voluntary Report is being submitted under the category of Other.

CORRECTIVE ACTIONS

The following corrective actions have been taken or are planned:

- 1) Training on this incident will be given to applicable mechanical craft, supervision, and planners. This training will stress the requirements of LLRTs, the importance of the containment as a vital boundary, as well as all associated tests and maintenance.
- 2) The mechanical maintenance planners have been instructed to include a specific requirement in the mechanical maintenance package for a LLRT prior to applicable maintenance.
- 3) The mechanical maintenance planners have been provided a list of Type B and C penetrations.
- 4) An additional field will be added to the planners worksheet to assist in scoping maintenance for any LLRT requirements. In addition, we will assess adding the same field to the computerized Nuclear Maintenance System (NMS).
- 5) A review will be made of other typical planned maintenance activities to determine if other prerequisites, similar to the LLRT for this event, must be considered during the planning period. These will then be assessed as to whether they should be added to the NMS and planners worksheet.

There have been no previous similar Licensee Event Reports. The contact for this event is L. S. Larragoite (301) 260-4983.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED ONE A0 3190-0104

EXPIRES 8/31/88

FACILITY NAME (1)

DOCKET NUMBER (1)

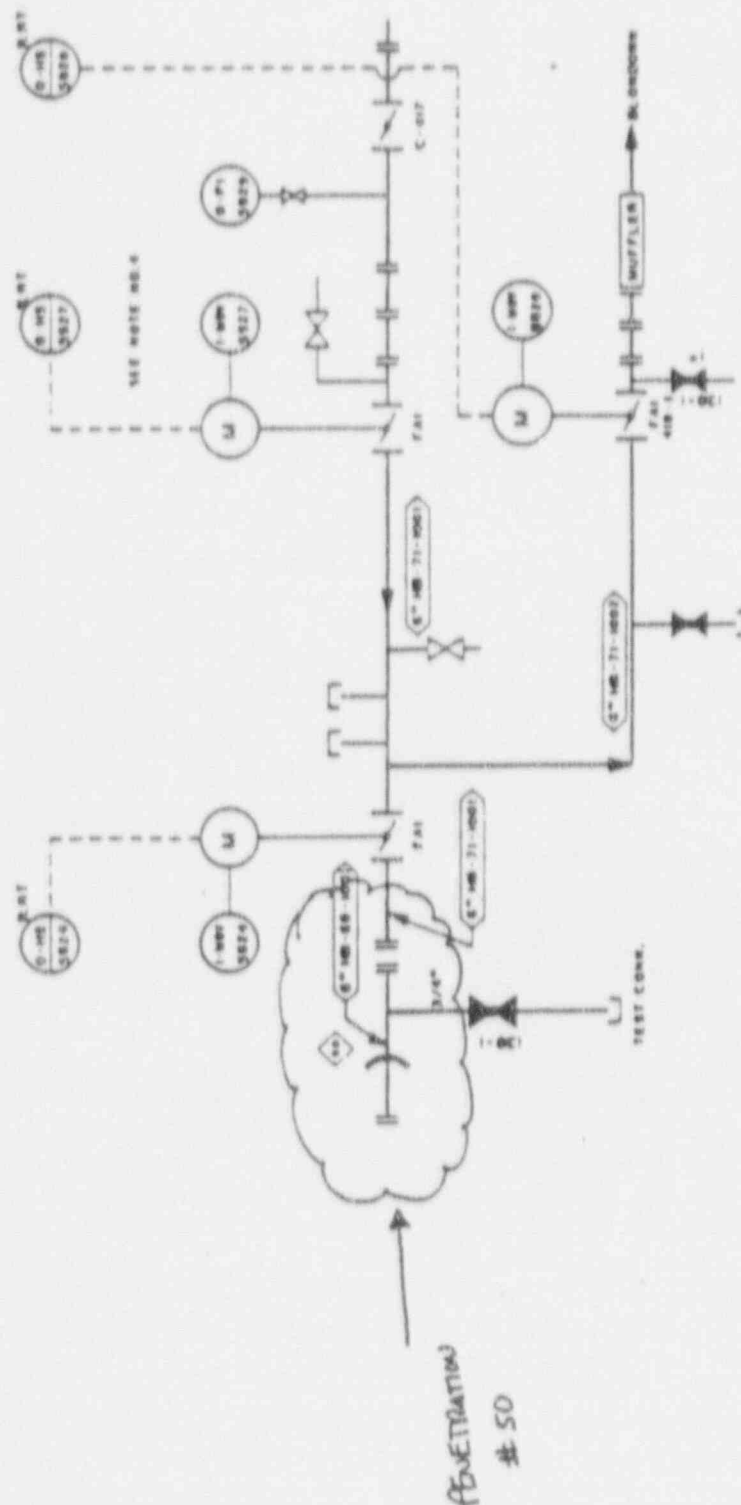
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Calvert Cliffs Unit 2

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TEXT (If more space is required, use additional NRC Form 306A 2/117)



APPENDIX H

Failed Local Leakage Rate Test Report

APPENDIX H

FAILED LOCAL LEAKAGE RATE TEST REPORT

This separate accompanying report is prepared to satisfy the requirements of 10 CFR 50, Appendix J, Section V.B.3. The as-found maximum pathway combined leakage for all penetrations subject to Type B and C tests exceeded 0.6 La (207,700 sccm), the allowable limit specified in Section III.C.3 for the test performed during the 1989 Outage.

The combined as-found maximum pathway local leakage rate was 1,007,385 sccm, approximately five times the allowable limit. The combined leakage rate criteria failure was caused by excessive leakage at several penetrations listed in the following table.

<u>PEN #</u>	<u>FUNCTION</u>	<u>VALVE #</u>	<u>AS-FOUND</u>	<u>AS-LEFT</u>	<u>CAUSE</u>
2B	RC CHARGING	CVC-184	91,190	192	Leakage through alternate paths, CVC-184 itself did not leak significantly
9	CNTMT SPRAY	SI-340	382,320	4,030	Boron build up on valve seat
10	CNTMT SPRAY	SI-330	90,624	1,520	Unknown
14	CNTMT PURGE	CV-1412/1413	46,345	416.77	Aging valve seats
44	FIRE SYSTEM	FP-145B	229,392	36	Debris on valve seat
64	CNTMT HEATING	PH-387	118,944	20	Check valve seat stuck open (burrs on bushing)

Valves at many other penetrations had maintenance performed or repairs because individual valve leakage rates were above administrative guidelines. However, these are not listed here because they were not significant contributors to the failure.

The as-left combined local leakage rate after repairs was 28,937 sccm.