REACTOR CONTAINMENT BUILDING INTEGRATED LEAKAGE RATE TEST

TYPES A, B, AND C PERIODIC TEST

GULF STATES UTILITIES COMPANY
RIVER BEND STATION
UNIT 1

DOCKET No. 50-458
OPERATING LICENSE No. NPF-47

MAY 1989

Prepared by

STONE & WEBSTER ENGINEERING CORPORATION
BOSTON, MASSACHUSETTS

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LIST OF ATTACHMENTS

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REFERENCES

1. 10CFR Part 50 , Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors, November 15, 1988.

2. River Bend Station Test Procedure STP-057-3703, Primary Reactor Building Integrated Leak Rate Test.

3. River Bend Station Test Procedure STP-057-3800, Local Leak Rate Tests.

4. ANSI N45.4, American National Standard, Leakage-Rate Testing of Containment Structures for Nuclear Reactors, March 16, 1972.

5. ANSI/ANS-56.8, Containment System Leakage Testing Requirements, January 20, 1987.[1]

[1] This document used only as a guideline and any reference to said document in no way implies compliance.

SECTION 1

PURPOSE

The purpose of this report is to present a description and analysis of the May 1989 Periodic Type A Primary Containment Integrated Leakage Rate Test (ILRT) and a summary of the Periodic Types B and C Local Leakage Rate Tests (LLRT) conducted since April 1985 at the River Bend Station. The River Bend Station, Unit No. 1 is operated by Gulf States Utilities Company (GSU). Specific plant information and technical data is contained in Attachment 1A.

Stone & Webster Engineering Corporation (SWEC) provided engineering consultation services to Gulf States Utilities Company during the performance of these test.

This report is submitted as required by 10CFR50, Appendix J, Paragraph V.B.

ATTACHMENT 1A

TEST DATA SUMMARY

A. Plant Information

Operator	Gulf States Utilities Company
Plant	River Bend Station - Unit 1
Location	St. Francisville, LA
Containment Type	BWR - Mark 3
Docket Number	50-458
Operating License No.	NPF-47
Date Test Completed	May 29, 1989

B. Technical Data

Containment Net Free Air Volume as Tested	1,427,786 cu. ft.
Calculated Peak Accident Pressure	7.6 psig

SECTION 2

SUMMARY

2.1 TYPE A TEST

2.1.1 Test Summary

Pressurization for the ILRT began at approximately 1255 hours on May 27, 1989. A pressurization rate of approximately 2.1 psi per hour was achieved. Extensive investigations of all penetration areas were conducted throughout the pressurization and the Type A test.

During the pressurization, two moisture detectors (MT 128 & MT 129) failed. The manner of failure suggested that they had lost their power supplies (Post-test investigation revealed that each of these sensors were connected to the same power supplies as a temporary fan. The fans tripped these breakers during the pressurization). It was decided to continue the test by reassigning the weight fractions of these two sensors to the remaining two containment moisture sensors.

Containment pressurization was secured at approximately 1313 hours on May 24, 1989. The pressurization piping system was isolated and vented.

At 2050 hours on May 27, 1989, the thermal stabilization criteria of Reference 2 was satisfied; however, the moisture sensors were still unstable. RTD 22D, which had been reading higher than the other sensors in its zone since before start of pressurization, began to show continually increasing temperature and was declared inoperable. The mass and moisture trends were monitored. At 1045 on May 28, 1989 the containment appeared to be more stable and the test was started at 1100.

Pressure, temperature and relative humidity data were continuously recorded throughout the test period at 15 minute intervals.

The Type A test was successfully completed after 24 hours at 1100 hours on May 29, 1989 with a Mass Point Upper Confidence Limit of 0.088797 percent/day which was well below the $0.75L_a$ acceptance criteria of 0.195 percent/day.

The Superimposed Verification Test was started at 1215 hours on May 29, 1989 and was successfully completed at 1615 hours on May 29, 1989. The results of the verification test satisfied the requirements of Reference 2.

2.2 LOCAL LEAKAGE RATE TESTS (Types B and C)

The Local Leakage Rate Tests (LLRT) of containment isolation valves and other containment penetrations were conducted as required by the methods described in the plant operating procedure, Reference 3, for the Types B and C tests.

Section 4 of this report summarizes the data for the LLRT conducted since the April 1985 Type A test in accordance with Appendix J, 10CFR50, Paragraph V.B.

SECTION 3

TYPE A TEST

3.1 EDITED LOG OF EVENTS

This log was edited from information contained in the ILRT Test Director's Official Type A Log of Events, and from Reference 2.

May 27, 1989

1015 Final containment, seal containment and drywell walk-downs successfully completed.

1035 RTD 22D is trending 10 F higher than the other RTDs in its zone.

1255 Started containment pressurization.

1335 Lost signal from MT 129, apparently from the trip of a lighting panel breaker in the containment.

1515 Signal from MT 128 lost in the same manner as MT 129.

1645 Secured containment pressurization at 23.004 psia. Pressurization system isolated and vented.

2050 Thermal stabilization criteria has been satisfied, however, the moisture sensors are still unstable. Continuing to monitor. RTD 22D is showing a continually rising temperature and is declared inoperable.

May 28, 1989

1025 Completed isolation of main steam line drain valves to the condenser and broke condenser vacuum. These valves were not part of the test lineup and breaking condenser vacuum provided test conditions more consistent with accident conditions.

1045 The mass trend seems to be leveling off and a decision is made to start the test at 1100.

1100 Started ILRT.

1205 Reviewed RCIC valve lineup, valves 1E51*MOVF066, 077, and 088 as potential leakage paths.

May 29, 1989

1100 Leakage rate test successfully completed.

1215 Superimposed Leak initiated. Verification test started.

1615 Superimposed Verification test successfully completed.

1900 Containment depressurization started.

May 30, 1989

1230 Containment depressurization completed.

3.2 GENERAL TEST DESCRIPTION

3.2.1 Prerequisites

In accordance with Reference 2, the following is a listing of the pertinent prerequisites completed and documented prior to containment pressurization:

a. All required Types B and C leakage rate testing have been completed or any remaining LLRTs have been evaluated for impact on the test.

b. Pressurization system lined-up and ready for operation.

c. All pressurized components and systems either removed from the containment or vented.

d. All required test instrumentation installed and calibrated within 6 months of the test.

e. Satisfactory inspection of the primary containment in accordance with Reference 2.

f. Data acquisition and analysis computer systems used for the test are operational.

g. All required system valve lineups completed.

h. Site meteorological data recorded during the performance of the ILRT (Attachment 3.2A)

i. Restricted plant access plan in effect.

j. RCS temperature maintained stable prior to and during the performance of the ILRT.

k. Instrument Selection Guide (ISG) calculated.

l. All require pool and tank pre-test levels have been recorded.

m. Pressure indicators on the air locks installed.

3.2.2 Equipment and Instrumentation

Pressurization of the primary containment was achieved by utilizing a temporary system consisting of 5 temporary air compressors manifolded with aftercoolers and a refrigerant air drier. The system included adequate instrumentation and valving to maintain proper monitoring and control of the compressed air quality throughout the pressurization sequence. The total capacity of the pressurization system was approximately 7,500 standard cubic feet per minute (SCFM).

The various containment parameters required to calculate containment leakage during the test, were monitored using instrumentation which consisted of 22 resistance temperature detectors, 6 dew point sensors, and 2 absolute pressure indicators. During the test 2 of the dewpoint sensors and one of the RTDs failed leaving 21 RTDs and 4 dewpoint sensors. Pertinent data for the test instrumentation is listed in Attachment 3.2B, and the Containment and Drywell Zones are shown on Attachment 3.2C. Elevations and azimuths are approximate.

A mass flow meter was used to perform the superimposed leakage verification test.

Instrument Selection Guide (ISG)

Sensor Type	No. of Sensors	Sensitivity Error	System Error
Pressure	2	0.002 psi	0.00 psi
Temperature	21	0.02 °F	0.02 °F
Relative Hum. Sensors	4	0.40 °F	1.00 °F

Test Duration	24 hrs.
Test Pressure	22.3 psia
Test Temperature	70 °F = 530 °R
Test Dewpoint Temp.	70 °F

$$ISG = \pm \frac{2400}{t}\left[2\left(\frac{EP}{P}\right)^2 + 2\left(\frac{ET}{T}\right)^2 + 2\left(\frac{EP_v}{P_v}\right)^2\right]^{1/2}$$

ISG $\leq$ 0.25 L_a which equals 0.065% per day since L_a = 0.26% per day

a. EP = error associated with absolute pressure instruments

EP = $0.002/\sqrt{2}$

EP = 0.001414

b. ET = error associated with temperature instruments

$ET = 0.028284/\sqrt{21}$

$ET = 0.006172$

c. EP_v = error associated with vapor pressure instruments

$EP_v = 0.013344/\sqrt{4}$

$EP_v = 0.00667$

Using values established in a,b and c above, calculate ISG.

$$ISG = \pm \frac{2400}{24}\left[2\left(\frac{0.0014}{22.3}\right)^2 + 2\left(\frac{0.0062}{530}\right)^2 + 2\left(\frac{0.00667}{22.3}\right)^2\right]^{1/2}$$

ISG = ± 0.043282 which is less than 0.065%/day (25% of L_a)

3.2.3 Data Acquisition System

The ERIS computer was used to scan the data from the 21 resistance temperature detectors and 4 dewpoint temperature sensor input signals. Data readings of the instantaneous values were printed every 15 minutes during pressurization, Leakage Rate and Verification tests. The pressure sensor and the verification flow meter readings were recorded manually.

3.2.4 Data Resolution System

The recorded data was manually inputted to a dedicated computer system using Stone & Webster Engineering Corporation's (SWEC) ILRT analysis program for data reduction and leakage rate calculations. The following calculations used the instantaneous values of the ILRT sensors to determine the Mass Point leakage rate.

Absolute Method of Mass Point Analysis

The Absolute Method of Mass Point Analysis consists of calculating the air mass within the containment structure, over the test period using pressure, temperature, and dewpoint temperature observations made during the ILRT. The air mass is computed using the ideal gas law as follows:

$$M = \frac{144V(P-P_v)}{RT} \qquad \text{(Eq. 1)}$$

where:

M = air mass, lbm
P = total pressure, psia
P_v = average vapor pressure, psia
R = 53.35 ft-lbf/lbm°R (for air)
T = average containment temperature, °R
V = containment free volume, ft^3

The leakage rate is then determined by plotting the air mass as a function of time, using a least-squares fit to determine the slope, A = dM/dT. The leakage rate is expressed as a percentage of the air mass lost in 24 hours or symbolically:

$$\text{Leakage Rate} = -2400\ (A/B) \qquad \text{(Eq. 2)}$$

Where A is the slope of the least-squares curve and B is the y-intercept. The sign convention is such that the leakage out of the containment is positive, and the units are in percent/day.

A confidence interval is calculated using a Student's T distribution. The sum of the leakage rate and confidence interval is the 95% Upper Confidence Limit - Mass Point (UCL-MP).

ATTACHMENT 3.2A

SITE METEOROLOGY

Date	Time	Ambient Tmperature (Deg F)	Barometric Pressure (Psia)	Wind Speed (MPH)	Wind Direction (Deg)	General Conditions
May 27, 1989						
	1000	79.8	14.85	4.6	268	Clear & Sunny
	1100	81.6	14.85	4.2	293	Clear & Sunny
	1200	83.6	14.85	4.7	287	Clear & Sunny
	1300	85.6	14.85	5.1	303	Clear & Sunny
	1400	87.3	14.84	4.6	264	Clear & Sunny
	1500	88.6	14.83	4.4	256	Clear & Sunny
	1600	89.1	14.82	4.8	240	Clear & Sunny
	1700	89.6	14.81	4.6	269	Clear & Sunny
	1800	89.4	14.80	3.6	291	Clear & Sunny
	1900	87.7	14.81	2.2	284	Clear Skies
	2000	84.4	14.81	1.2	243	Clear Skies
	2100	79.6	14.81	0.6	352	Clear
	2200	77.6	14.82	0.0	-	Clear Night
	2300	76.5	14.82	0.0	-	Clear Night
May 28, 1989						
	0000	75.6	14.82	1.0	22	Clear Night
	0100	76.3	14.82	2.1	37	Clear Night
	0200	76.0	14.82	1.5	127	Clear Night
	0300	Note 1	14.82	Note 1	Note 1	Clear Night
	0400	Note 1	14.82	Note 1	Note 1	Clear Night
	0500	71.9	14.83	0.0	-	Clear Night
	0600	71.9	14.83	0.8	60	Clear Night
	0700	71.7	14.84	0.0	-	Clear Skies
	0800	74.1	14.85	1.8	47	Clear Skies
	0900	78.2	14.85	3.3	66	Clear Skies
	1000	81.2	14.84	3.2	69	Clear Skies
	1100	84.0	14.84	2.7	15	Clear Skies
	1200	86.5	14.83	3.7	3	Clear Skies
	1300	87.7	14.83	3.8	2	Clear Skies
	1400	89.1	14.81	4.2	13	Clear Skies
	1500	89.9	14.80	3.7	5	Scattered Clouds
	1600	90.4	14.79	3.6	24	Partly Cloudy
	1700	90.4	14.78	3.8	7	Scattered Clouds
	1800	90.1	14.78	3.5	3	Clear Skies
	1900	89.1	14.78	2.4	8	Clear
	2000	85.3	14.78	1.0	354	Clear
	2100	80.9	14.78	0.0	-	Clear
	2200	79.3	14.79	1.3	62	Clear
	2300	78.5	14.79	0.6	30	Clear

ATTACHMENT 3.2A

SITE METEOROLOGY

Date	Time	Ambient Tmperature (Deg F)	Barometric Pressure (Psia)	Wind Speed (MPH)	Wind Direction (Deg)	General Conditions
May 29, 1989						
	0000	78.5	14.79	1.3	101	Clear
	0100	78.2	14.79	2.0	106	Clear
	0200	77.2	14.79	2.5	138	Clear
	0300	76.4	14.79	2.2	122	Clear
	0400	75.6	14.79	2.2	140	Clear
	0500	75.1	14.80	2.6	107	Clear
	0600	74.2	14.80	2.4	93	Clear
	0700	73.6	14.81	2.0	84	Cloudy
	0800	74.7	14.81	2.7	94	Cloudy
	0900	77.5	14.82	3.2	110	Partly Cloudy
	1000	80.4	14.81	3.4	122	Partly Cloudy
	1100	82.9	14.81	4.0	110	Clear
	1200	85.6	14.81	3.3	116	Scattered Clouds
	1300	87.2	14.80	3.5	84	Scattered Clouds
	1400	89.0	14.79	4.0	111	Clear
	1500	89.2	14.78	4.4	108	Clear
	1600	Note 1	14.77	Note 1	Note 1	Clear
	1700	Note 1	14.76	Note 1	Note 1	Clear

NOTES:

1. Printer off.

ATTACHMENT 3.2B

INSTRUMENTATION LIST

The following instruments were calibrated and functionally verified within 6 months prior to the performance of this test and in accordance with Reference 4.

Instrument	Weight Fraction	Computer Point	Elevation	Azimuth	Zone	Range	Accuracy
A.	**Temperature**						
T01	0.141405	LMS*RTD22B	240	180	C1	32-150°F	±0.02°F
T02	0.141405	LMS*RTD22C	240	020	C1	32-150°F	±0.02°F
T03	0.000000*	LMS*RTD22D	240	270	C1	32-150°F	±0.02°F
T04	0.095410	LMS*RTD21N	193	100	C2	32-150°F	±0.02°F
T05	0.095410	LMS*RTD21P	193	340	C2	32-150°F	±0.02°F
T06	0.095410	LMS*RTD22A	196	225	C2	32-150°F	±0.02°F
T07	0.030627	LMS*RTD21K	175	120	C3	32-150°F	±0.02°F
T08	0.030627	LMS*RTD21L	170	038	C3	32-150°F	±0.02°F
T09	0.056398	LMS*RTD21M	175	270	C3	32-150°F	±0.02°F
T10	0.037350	LMS*RTD21G	152	075	C4	32-150°F	±0.02°F
T11	0.025340	LMS*RTD21H	150	300	C4	32-150°F	±0.02°F
T12	0.021340	LMS*RTD21J	152	230	C4	32-150°F	±0.02°F
T13	0.038870	LMS*RTD21D	128	230	C5	32-150°F	±0.02°F
T14	0.038870	LMS*RTD21E	126	145	C5	32-150°F	±0.02°F
T15	0.038870	LMS*RTD21F	128	050	C5	32-150°F	±0.02°F
T16	0.037550	LMS*RTD21A	103	180	C6	32-150°F	±0.02°F
T17	0.037550	LMS*RTD21B	103	075	C6	32-150°F	±0.02°F
T18	0.037550	LMS*RTD21C	103	330	C6	32-150°F	±0.02°F
T19	0.250000	LMS*RTD22G	107	125	D7	32-150°F	±0.02°F
T20	0.250000	LMS*RTD22H	100	300	D7	32-150°F	±0.02°F
T21	0.250000	LMS*RTD22E	148	030	D8	32-150°F	±0.02°F
T22	0.250000	LMS*RTD22F	131	210	D8	32-150°F	±0.02°F

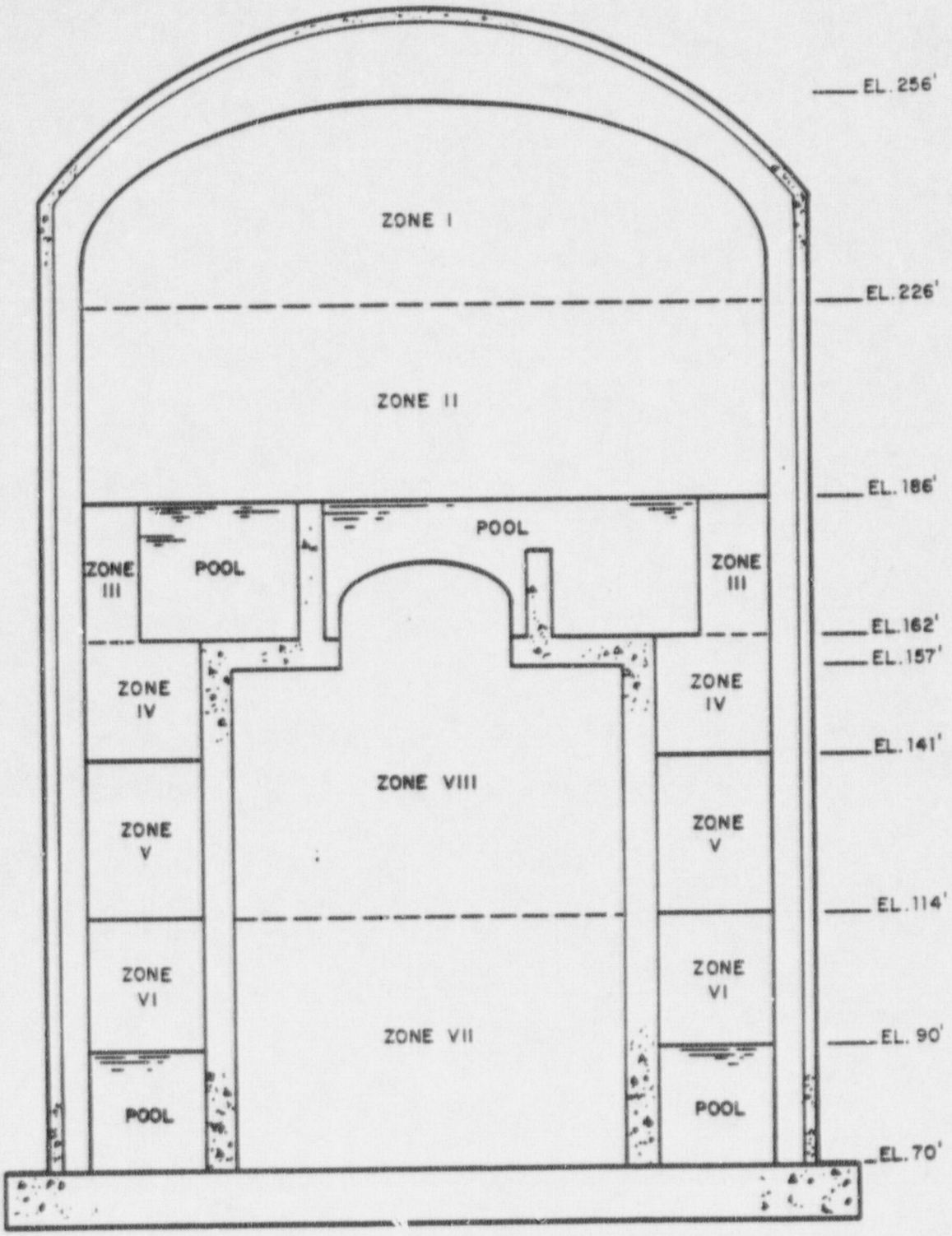
ATTACHMENT 3.2B

INSTRUMENTATION LIST

Instrument	Weight Fraction	Computer Point	Elevation	Azimuth	Zone	Range	Accuracy
B. Dewpoint Temperature							
M1	0.000000*	LMS*MT128	205	270	C1	0-155°F	±0.4°F
M2	0.000000*	LMS*MT129	205	090	C1	0-155°F	±0.4°F
M3	0.500000	LMS*MT132	152	305	C2	0-155°F	±0.4°F
M4	0.500000	LMS*MT133	146	140	C2	0-155°F	±0.4°F
M5	0.500000	LMS*MT130	113	095	D3	0-155°F	±0.4°F
M6	0.500000	LMS*MT131	115	275	D3	0-155°F	±0.4°F
C. Pressure							
P1	1.000000	LMS*PIT121	Local	-	C	0-100psia	±0.02 Psi
P2	1.000000	LMS*PIT122	Local	-	D	0-100psia	±0.02 Psi
D. Superimposed Leakage Verification Test Flow Instrument							
Mass Flow Meter		-	Local	-	-	0-10scfm	±1.0%F.S.

NOTES:

* These instruments were not used during the test.



PROFILE VIEW REACTOR BUILDING

ATTACHMENT 3.2B
TEMPERATURE ZONES
RIVER BEND STATION
GULF STATES UTILITIES

3.3 TEST RESULTS

3.3.1 Presentation of Test Results

The test data for the May 1989 ILRT is based on a 24 hour test period starting at 1100 hours on May 27, 1989. The final test results were determined using SWEC's ILRT computer program. The Measured Input Data, Reduced Input Variables, Mass Point Analysis Test Results, and representative graphs are contained in Attachments 3.3A through 3.3L.

Mass Point Analysis Test Results for the ILRT satisfied the procedural acceptance criteria.

The Type A Test instrumentation was verified by the Superimposed Leakage Verification Test Method. The Measured Input Data, Reduced Input Variables, Mass Point Analysis Test Results, and representative graphs are contained in Attachments 3.3M through 3.3R.

Mass Point Analysis Test Results for the Superimposed Leakage Verification Test satisfied the procedural acceptance criteria.

3.3.2 ILRT Results

The 23.3 psia ILRT was conducted in accordance with Reference 2. The results for the ILRT and for the Supplemental Test are shown below.

3.3.2.1 ILRT Results - Mass Point Analysis

	Item		(Percent/Day)
1.	L_{am}, Leakage Rate Calculated		0.079532
2.	UCL, Upper Confidence Level		0.009265
3.	UCL-MP, L_{am} Leakage Rate plus UCL (1&2)		0.088797
4.	Corrections for: (See Sections 3.3.2.4)		
	i. Type B & C Penalties	0.001374	
	ii. Water Levels	0.010393	
	iii. CRD Accumulators	0.009700	
	iv. Air Lock Accumulators	0.001110	
	v. Total Corrections (i. through iv.)		0.022577
5.	Total Reported Type A Leakage Rate (Items 3&4 v)		0.111374

Results were within the acceptable limits of 0.75 L_a or 0.195 percent/day.

3.3.2.3 Supplemental Test Results

The Supplemental Verification Test was performed using the Superimposed Leakage Verification Test Method in accordance with Reference 2. The results for the Superimposed Leakage Verification Test are shown below.

1. The Superimposed Leakage Verification Test is acceptable provided L_c falls within the following range:

$$(L_{am} + L_o - 0.25\ L_a) \leq L_c \leq (L_{am} + L_o + 0.25\ L_a)$$

Where: L_{am} = Type A calculated leakage rate (computer)
(L_{am} - MP = 0.079532 %/day)

L_o = Superimposed leakage rate (rotameter)
(L_o = 0.260521 %/day)

L_a = Maximum allowable leakage rate
(L_a = 0.26 %/day)

L_c = Composite leakage rate (computer)
(L_c - MP = 0.348965 %/day)

$$(0.079532 + 0.260521 - 0.065) \leq 0.348965 \leq (0.079532 + 0.260521 + 0.065)$$

$$(0.275053) \leq 0.348965 \leq (0.405053)$$

The Superimposed Leakage Verification Test met the requirements set forth in Reference 2.

3.3.2.4 Leakage Penalties Added to Type A Leakage

Penetration leakage to be added since these penetrations were isolated or could not be vented and drained during the Type A test. The leakage assigned is the recorded value for minimum pathway analysis.

i.	Type B & C Penalties	Description	Leakage SCFD
	Z20	RHR	27.56
	Z6	RWCU	0.0
	Z7	RWCU	0.102
	Z129	RWCU	0.52
	Z29	CRD	0.11
	Z48	CCP	0.34
	Z49	CCP	1.13
		Total	29.762

Total Type B & C Leakage 29.762 SCFD
Total Type B & C Leakage 0.001374 percent/day

ii.	Water Level Corrections	Description	Gallons
		Drywell Floor Drain Tank	300
		Reactor Bldg. Floor Drain	20
		PED Floor Drain Sump	5
		Cont. Equip. Drain Sump	360
		Drywell Equip. Drain Sump	425

Total Water Level Corrections 1110 Gallons
Total Water Level Corrections 0.010393 percent/day

iii.	CRD Accumulator Corr.	Description	SCFM
		Accumulators	0.1465

Total CRD accumulator Corrections 0.1465 SCFM
Total CRD accumulator Corrections 0.009700 percent/day

iv.	Air Lock Accumulators	Description	SCFM
		Air Lock Accumulators	0.1673

Total Air Lock Accumulator Corrections 0.1673 SCFM
Total Air Lock Accumulator Corrections 0.001110 percent/day

v.	Total Corrections	Description	Leakage Percent/Day
	Total Type A Corrections (i. through iv.)	Penalties and Corrections	0.022577

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 11:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.721	91.112	102.052	91.762	90.863	90.508	87.631	86.647	87.871	87.657
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.151	86.314	86.626	88.342	86.478	81.636	81.391	81.520	91.210	91.141
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.598	95.695	88.066	85.424	82.115	80.607	81.256	80.323	22.925	22.939

05/28/89 11:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.721	91.143	102.052	91.777	90.879	90.539	87.647	86.647	87.886	87.672
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.182	86.330	86.626	88.404	86.478	81.651	81.407	81.532	91.210	91.141
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.598	95.711	88.066	85.424	82.092	80.723	81.046	80.300	22.926	22.940

05/28/89 11:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.737	91.143	102.052	91.746	90.894	90.554	87.678	86.663	87.886	87.688
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.182	86.330	86.626	88.420	86.509	81.667	81.407	81.536	91.210	91.141
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.629	95.711	88.066	85.424	82.092	80.700	80.930	80.254	22.926	22.940

05/28/89 11:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.752	91.159	102.052	91.808	90.925	90.570	87.693	86.694	87.902	87.703
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.182	86.330	86.641	88.435	86.509	81.682	81.438	81.567	91.225	91.157
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.629	95.711	88.066	85.424	82.022	80.700	81.303	80.160	22.927	22.941

05/28/89 12:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.768	91.159	102.052	91.808	90.941	90.585	87.709	86.709	87.917	87.719
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.213	86.361	86.657	88.466	86.524	81.698	81.438	81.582	91.225	91.157
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.614	95.726	88.066	85.424	81.789	80.467	81.073	80.090	22.927	22.941

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 12:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.768	91.174	102.052	91.824	90.941	90.601	87.724	86.725	87.948	87.734
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.213	86.376	86.641	88.466	86.539	81.698	81.453	81.598	91.210	91.141
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.629	95.742	88.066	85.424	82.161	80.700	81.419	80.393	22.928	22.942

05/28/89 12:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.783	91.190	102.052	91.839	90.956	90.601	87.740	86.725	87.948	87.765
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.229	86.376	86.688	88.451	86.539	81.713	81.469	81.613	91.210	91.048
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.629	95.742	88.066	85.424	81.929	80.397	80.464	79.648	22.929	22.942

05/28/89 12:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.799	91.190	102.052	91.854	90.941	90.601	87.755	86.756	87.964	87.780
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.229	86.376	86.688	88.451	86.570	81.729	81.484	81.613	91.194	90.937
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.645	95.757	88.066	85.424	82.278	80.886	81.023	80.254	22.930	22.943

05/28/89 13:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.799	91.190	102.052	91.870	90.972	90.601	87.770	86.756	87.979	87.796
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.229	86.391	86.703	88.482	86.570	81.744	81.484	81.629	91.194	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.645	95.773	88.066	85.424	82.371	80.676	81.279	80.207	22.930	22.943

05/28/89 13:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.814	91.205	102.052	91.870	91.003	90.632	87.786	86.771	87.995	87.811
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.244	86.407	86.703	88.497	86.601	81.760	81.515	81.644	91.179	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.645	95.773	88.066	85.424	81.952	80.281	81.209	79.997	22.930	22.943

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 13:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.814	91.236	102.052	91.885	90.987	90.632	87.801	86.802	88.010	87.842
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.260	86.422	86.734	88.482	86.617	81.760	81.515	81.644	91.179	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.660	95.773	88.066	85.424	82.464	80.978	81.093	80.417	22.931	22.944

05/28/89 13:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.830	91.236	102.052	91.885	91.003	90.662	87.817	86.817	88.025	87.858
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.275	86.422	86.734	88.513	86.648	81.790	81.546	81.675	91.179	90.847
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.660	95.788	88.066	85.424	82.231	80.700	81.070	80.300	22.931	22.945

05/28/89 14:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.830	91.236	102.052	91.901	91.003	90.662	87.832	86.833	88.025	87.873
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.275	86.438	86.734	88.528	86.663	81.806	81.561	81.690	91.179	90.847
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.645	95.788	88.066	85.424	82.487	80.839	81.419	80.323	22.931	22.945

05/28/89 14:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.830	91.252	102.052	91.901	91.003	90.647	87.848	86.848	88.041	87.904
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.275	86.438	86.765	88.590	86.679	81.806	81.577	81.706	91.179	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.804	88.066	85.424	82.487	80.955	81.442	80.533	22.931	22.945

05/28/89 14:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.845	91.252	102.052	91.916	91.003	90.647	87.863	86.879	88.041	87.920
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.291	86.453	86.765	88.590	86.694	81.821	81.592	81.721	91.163	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.804	88.066	85.424	82.161	80.490	81.093	80.021	22.931	22.946

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 14:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.845	91.252	102.052	91.916	91.018	90.662	87.863	86.879	88.041	87.935
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.306	86.453	86.796	88.605	86.709	81.852	81.592	81.737	91.179	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.804	88.066	85.424	82.487	80.932	81.023	80.347	22.932	22.946

05/28/89 15:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.876	91.252	102.052	91.932	91.034	90.662	87.894	86.895	88.072	87.951
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.322	86.469	86.780	88.559	86.725	81.852	81.608	81.737	91.163	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.804	88.066	85.424	82.464	81.048	81.140	80.650	22.933	22.947

05/28/89 15:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.876	91.283	102.052	91.932	91.049	90.693	87.925	86.910	88.087	87.966
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.337	86.469	86.780	88.590	86.756	81.868	81.608	81.768	91.163	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.660	95.804	88.066	85.424	82.533	80.700	81.532	80.393	22.933	22.948

05/28/89 15:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.876	91.298	102.052	91.963	91.065	90.693	87.925	86.941	88.087	87.997
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.337	86.484	86.796	88.605	86.787	81.883	81.608	81.768	91.179	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.660	95.819	88.066	85.424	82.673	81.374	81.256	80.673	22.933	22.949

05/28/89 15:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.892	91.298	102.052	91.963	91.080	90.709	87.956	86.957	88.118	87.997
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.337	86.500	86.811	88.636	86.802	81.899	81.623	81.783	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.660	95.819	88.066	85.424	82.301	80.676	81.582	80.370	22.934	22.949

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 16:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.892	91.298	102.052	91.963	91.080	90.709	87.972	86.972	88.118	88.028
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.352	86.500	86.811	88.636	86.833	81.899	81.623	81.783	91.163	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.835	88.066	85.424	82.324	80.816	81.559	80.370	22.935	22.949

05/28/89 16:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.892	91.298	102.052	91.978	91.111	90.740	87.987	86.988	88.134	88.043
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.368	86.515	86.811	88.605	86.849	81.914	81.639	81.814	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.835	88.066	85.424	82.719	81.211	81.419	80.743	22.935	22.950

05/28/89 16:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.907	91.329	102.052	91.994	91.096	90.724	88.002	87.003	88.149	88.059
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.383	86.515	86.827	88.590	86.879	81.930	81.654	81.829	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.850	88.066	85.424	82.626	81.048	81.244	80.626	22.935	22.950

05/28/89 16:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.907	91.314	102.052	91.994	91.034	90.740	88.018	87.018	88.165	88.074
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.383	86.531	86.842	88.652	86.910	81.945	81.654	81.845	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.850	88.066	85.424	82.650	81.002	81.652	80.603	22.936	22.951

05/28/89 17:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.923	91.329	102.052	92.009	91.127	90.755	88.033	87.049	88.196	88.074
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.399	86.546	86.842	88.683	86.941	81.945	81.685	81.845	91.179	90.786
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.850	88.066	85.424	82.929	81.257	81.442	80.929	22.936	22.951

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/39
MEASURED INPUT DATA

05/28/89 17:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.938	91.329	102.052	92.009	91.142	90.771	88.049	87.065	88.196	88.090
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.414	86.546	86.858	88.667	86.957	81.960	81.701	81.829	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.850	88.066	85.424	83.092	81.467	81.466	80.883	22.936	22.951

05/28/89 17:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.938	91.345	102.052	92.025	91.127	90.771	88.080	87.065	88.227	88.105
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.430	86.562	86.858	88.652	86.988	81.976	81.701	81.876	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.850	88.066	85.424	82.905	81.234	81.396	80.859	22.937	22.952

05/28/89 17:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.938	91.345	102.052	92.025	91.142	90.755	88.080	87.080	88.242	88.136
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.445	86.562	86.889	88.667	87.019	81.991	81.731	81.891	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.866	88.066	85.424	82.464	80.746	81.303	80.184	22.937	22.952

05/28/89 18:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.954	91.376	102.052	92.040	91.158	90.786	88.111	87.096	88.258	88.152
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.445	86.577	86.889	88.667	87.034	82.007	81.716	81.907	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.866	88.066	85.424	82.905	81.257	81.466	80.976	22.937	22.953

05/28/89 18:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.954	91.376	102.052	92.056	91.158	90.802	88.126	87.111	88.273	88.167
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.461	86.577	86.904	88.683	87.049	82.022	81.731	81.907	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.881	88.066	85.424	82.673	80.886	81.722	80.556	22.938	22.953

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 18:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.969	91.391	102.052	92.056	91.173	90.817	88.142	87.142	88.289	88.183
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.476	86.577	86.935	88.667	87.065	82.038	81.747	81.922	91.179	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.897	88.066	85.424	82.533	80.700	81.536	80.347	22.938	22.954

05/28/89 18:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
90.984	91.407	102.052	92.071	91.173	90.817	88.157	87.142	88.304	88.198
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.492	86.593	86.920	88.683	87.065	82.038	81.762	81.953	91.179	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.897	88.066	85.424	82.905	81.188	81.699	80.859	22.939	22.954

05/28/89 19:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.000	91.407	102.052	92.087	91.189	90.817	88.173	87.158	88.319	88.229
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.507	86.608	86.935	88.729	87.096	82.053	81.778	81.953	91.179	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.676	95.897	88.066	85.424	82.999	81.420	81.419	80.859	22.939	22.955

05/28/89 19:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.000	91.407	102.052	92.102	91.220	90.848	88.188	87.173	88.335	88.245
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.523	86.623	86.935	88.729	87.127	82.069	81.778	81.968	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.912	88.066	85.424	83.208	81.467	81.536	81.069	22.940	22.955

05/28/89 19:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.031	91.438	102.052	92.102	91.220	90.833	88.204	87.189	88.350	88.260
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.538	86.639	86.951	88.714	87.142	82.069	81.809	81.984	91.179	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.912	88.066	85.424	82.673	80.909	81.512	80.370	22.940	22.956

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 19:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.031	91.453	102.052	92.118	91.266	90.848	88.219	87.204	88.366	88.260
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.554	86.639	86.966	88.745	87.142	82.084	81.809	81.999	91.179	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.928	88.066	85.424	82.673	[illegible]141	81.676	80.580	22.941	22.956

05/28/89 20:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.046	91.468	102.052	92.133	91.266	90.879	88.234	87.235	88.381	88.291
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.569	86.654	86.981	88.760	87.173	82.100	81.840	81.999	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.928	88.066	85.424	82.719	80.816	81.676	80.487	22.941	22.957

05/28/89 20:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.062	91.484	102.052	92.149	91.266	90.895	88.250	87.235	88.412	88.291
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.585	86.670	86.981	88.729	87.173	82.115	81.840	82.015	91.194	90.801
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.928	88.066	85.424	83.115	81.606	81.606	81.092	22.942	22.958

05/28/89 20:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.062	91.468	102.052	92.149	91.282	90.895	88.281	87.266	88.412	88.415
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.600	86.685	87.012	88.745	87.204	82.130	81.870	82.030	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.928	88.066	85.424	83.347	81.490	81.909	81.186	22.943	22.958

05/28/89 20:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.062	91.499	102.052	92.180	91.297	90.895	88.281	87.266	88.443	88.337
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.600	86.701	87.028	88.775	87.204	82.130	81.870	82.046	91.179	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.928	88.066	85.424	82.766	81.141	81.722	80.696	22.943	22.959

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 21:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.093	91.515	102.052	92.180	91.313	90.910	88.296	87.281	88.443	88.353
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.616	86.701	87.028	88.760	87.219	82.161	81.886	82.061	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.943	88.066	85.424	82.929	80.955	81.722	80.603	22.944	22.959

05/28/89 21:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.093	91.546	102.052	92.195	91.344	90.926	88.327	87.312	88.459	88.368
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.631	86.701	87.028	88.760	87.219	82.161	81.901	82.077	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.943	88.066	85.424	82.859	80.978	81.839	80.650	22.944	22.960

05/28/89 21:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.108	91.484	102.052	92.211	91.359	90.941	88.327	87.312	88.474	88.384
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.646	86.716	87.043	88.776	87.250	82.177	81.932	82.092	91.194	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.943	88.066	85.424	83.022	81.560	81.606	81.022	22.945	22.961

05/28/89 21:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.124	91.546	102.052	92.226	91.359	90.957	88.343	87.328	88.490	88.398
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.662	86.732	87.059	88.791	87.250	82.192	81.932	82.108	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.958	88.066	85.424	83.115	81.188	81.629	80.789	22.945	22.961

05/28/89 22:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.155	91.577	102.052	92.242	91.375	90.988	88.374	87.359	88.521	88.430
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.677	86.747	87.059	88.807	87.266	82.208	81.948	82.108	91.194	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	95.974	88.066	85.424	83.022	81.211	81.932	80.789	22.947	22.962

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 22:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.170	91.577	102.052	92.257	91.390	90.988	88.389	87.359	88.536	88.446
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.693	86.747	87.074	88.807	87.266	82.208	81.948	82.138	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.691	95.974	88.066	85.424	83.115	81.606	81.722	81.139	22.948	22.963

05/28/89 22:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.186	91.608	102.052	92.288	91.406	91.003	88.405	87.390	88.552	88.461
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.708	86.763	87.090	88.838	87.281	82.223	81.979	82.138	91.194	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.989	88.066	85.424	83.278	81.583	81.676	81.162	22.949	22.963

05/28/89 22:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.186	91.623	102.052	92.288	91.437	91.034	88.420	87.390	88.567	88.477
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.708	86.763	87.105	88.838	87.297	82.239	81.994	82.154	91.194	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.989	88.066	85.424	83.161	81.490	81.559	80.976	22.950	22.964

05/28/89 23:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.217	91.639	102.052	92.303	91.452	91.050	88.451	87.420	88.613	88.492
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.739	86.778	87.105	88.853	87.312	82.254	82.010	82.169	91.210	90.816
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.989	88.066	85.424	83.487	81.746	81.885	81.232	22.950	22.964

05/28/89 23:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.217	91.670	102.052	92.334	91.499	91.065	88.451	87.436	88.613	88.523
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.755	86.794	87.121	88.822	87.328	82.254	82.010	82.169	91.210	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	95.989	88.066	85.424	83.115	81.118	81.978	80.650	22.951	22.965

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/28/89 23:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.248	91.685	102.052	92.350	91.499	91.096	88.482	87.467	88.613	88.523
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.770	86.809	87.136	88.884	87.343	82.254	82.040	82.185	91.210	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.707	96.005	88.066	85.424	83.161	81.164	82.025	80.836	22.951	22.966

05/28/89 23:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.263	91.701	102.052	92.365	91.499	91.096	88.497	87.467	88.629	88.538
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.770	86.809	87.152	88.900	87.359	82.285	82.056	82.200	91.210	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	95.989	88.066	85.424	83.371	81.653	81.629	81.186	22.952	22 967

05/29/89 00:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.294	91.732	102.052	92.381	91.530	91.127	88.528	87.513	88.644	88.569
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.801	86.825	87.167	88.884	87.374	82.285	82.056	82.216	91.225	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.020	88.066	85.424	83.161	81.397	81.839	80.953	22.953	22.967

05/29/89 00:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.294	91.747	102.052	92.412	91.530	91.158	88.528	87.513	88.660	88.585
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.817	86.840	87.167	88.884	87.374	82.254	82.071	82.216	91.225	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.020	88.066	85.424	83.347	81.420	82.072	81.116	22.954	22.967

05/29/89 00:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.325	91.778	102.052	92.427	91.576	91.158	88.559	87.544	88.691	88.616
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.817	86.840	87.183	88.900	87.389	82.300	82.071	82.231	91.225	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.020	88.066	85.424	82.999	80.839	81.419	80.463	22.954	22.968

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 00:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.341	91.794	102.052	92.443	91.623	91.173	88.575	87.560	88.691	88.631
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.848	86.871	87.183	88.946	87.405	82.316	82.102	82.247	91.225	90.847
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.036	88.066	85.424	83.022	81.211	81.932	80.603	22.955	22.970

05/29/89 01:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.372	91.825	102.052	92.474	91.623	91.189	88.590	87.590	88.722	88.647
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.863	86.871	87.213	88.931	87.405	82.331	82.071	82.247	91.225	90.832
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.036	88.066	85.424	83.920	81.141	81.629	80.603	22.956	22.970

05/29/89 01:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.387	91.840	102.052	92.505	91.638	91.204	88.606	87.590	88.737	88.662
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.879	86.886	87.229	88.977	87.436	82.347	82.118	82.277	91.225	90.847
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.738	96.036	88.066	85.424	83.278	81.490	81.769	80.999	22.957	22.971

05/29/89 01:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.418	91.856	102.052	92.520	91.669	91.251	88.621	87.606	88.784	88.678
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.894	86.886	87.229	88.931	87.436	82.362	82.133	82.277	91.241	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.738	96.051	88.066	85.424	83.161	81.002	81.978	80.836	22.957	22.972

05/29/89 01:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.449	91.887	102.052	92.536	91.685	91.251	88.652	87.637	88.799	88.693
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.909	86.902	87.244	88.946	87.420	82.362	82.149	82.293	91.241	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.629	96.051	88.066	85.424	83.068	81.188	81.629	80.720	22.958	22.973

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 02:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.464	91.918	102.052	92.567	91.716	91.297	88.668	87.652	88.815	88.709
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.940	86.917	87.244	88.962	87.467	82.378	82.149	82.293	91.241	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.067	88.066	85.424	83.394	81.234	82.095	80.789	22.958	22.973

05/29/89 02:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.495	91.933	102.052	92.598	91.731	91.328	88.668	87.668	88.830	88.724
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.956	86.933	87.275	88.962	87.467	82.393	82.149	82.308	91.241	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.738	96.067	88.066	85.424	83.301	81.234	82.025	80.953	22.960	22.974

05/29/89 02:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.511	91.949	102.052	92.613	91.747	91.328	88.699	87.699	88.861	88.740
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.956	86.948	87.275	88.977	87.498	82.409	82.164	82.324	91.256	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.722	96.067	88.066	85.424	83.487	81.490	81.862	80.999	22.960	22.974

05/29/89 02:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.542	91.980	102.052	92.644	91.793	91.344	88.714	87.699	88.87[illegible]	[illegible].755
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
87.971	86.948	87.291	89.023	87.513	82.409	82.210	82.339	91.256	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.067	88.066	85.424	83.347	81.281	82.025	80.859	22.961	22.976

05/29/89 03:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.557	92.011	102.052	92.660	91.793	91.359	88.745	87.730	88.876	88.786
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.002	86.964	87.306	89.039	87.529	82.424	82.195	82.355	91.256	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.082	88.066	85.424	83.650	81.769	82.118	81.302	22.962	22.977

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 03:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.573	92.041	102.052	92.690	91.824	91.406	88.760	87.745	88.907	88.786
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.018	86.979	87.322	89.039	87.529	82.424	82.195	82.355	91.272	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.082	88.066	85.424	83.464	81.583	81.955	81.069	22.962	22.977

05/29/89 03:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.604	92.057	102.052	92.706	91.840	91.437	88.776	87.761	88.923	88.786
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.018	86.995	87.322	89.054	87.544	82.455	82.210	82.370	91.272	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.082	88.066	85.424	83.719	81.653	82.165	81.349	22.964	22.978

05/29/89 03:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.635	92.072	102.052	92.737	91.871	91.468	88.807	87.776	88.954	88.801
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.049	87.010	87.337	89.070	87.559	82.455	82.210	82.386	91.272	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.098	88.066	85.424	83.603	81.885	82.212	81.442	22.965	22.979

05/29/89 04.00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.650	92.088	102.052	92.752	91.886	91.468	88.822	87.792	88.969	88.817
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.064	87.010	87.353	89.101	87.559	82.455	82.226	82.401	91.272	90.863
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.098	88.066	85.424	83.487	81.560	82.281	80.976	22.965	22.980

05/29/89 04:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.697	92.119	102.052	92.783	91.933	91.499	88.838	87.822	89.000	88.832
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.080	87.026	87.368	89.085	87.575	82.486	82.257	82.417	91.272	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.738	96.113	88.066	85.424	83.859	82.025	82.048	81.489	22.966	22.980

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 04:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.697	92.150	102.052	92.814	91.933	91.514	88.853	87.822	89.016	88.832
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.095	87.041	87.368	89.116	87.590	82.486	82.257	82.417	91.272	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.113	88.066	85.424	83.324	81.885	82.002	81.302	22.967	22.981

05/29/89 04:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.728	92.181	102.052	92.830	91.979	91.499	88.869	87.838	89.031	88.848
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.111	87.057	87.384	89.101	87.621	82.517	82.272	82.447	91.272	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.113	88.066	85.424	83.478	81.722	81.909	81.116	22.967	22.981

05/29/89 05:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.774	92.212	102.052	92.861	91.995	91.545	88.900	8. 869	89.062	88.863
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_ C	T_7A	T_7B
88.111	87.057	87.399	89.147	87.621	82.501	82.288	82.447	91.287	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.129	88.066	85.424	83.533	81.188	82.212	80.836	22.969	22.983

05/29/89 05:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.805	92.227	102.052	92.876	92.010	91.576	88.915	87.869	89.062	88.879
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.126	87.072	87.415	89.132	87.637	82.532	82.288	82.447	91.287	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.144	88.066	85.424	83.208	81.629	82.002	81.092	22.969	22.984

05/29/89 05:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.805	92.243	102.052	92.907	92.041	91.607	88.946	87.900	89.093	88.894
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.157	87.087	87.430	89.116	87.652	82.532	82.303	82.447	91.287	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.129	88.066	85.424	83.882	82.071	82.235	81.535	22.970	22.985

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 05:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.836	92.289	102.052	92.938	92.088	91.638	88.962	87.884	89.109	88.925
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.173	87.103	87.430	89.147	87.668	82.532	82.319	82.478	91.287	90.878
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.753	96.144	88.066	85.424	83.905	82.001	81.909	81.372	22.971	22.986

05/29/89 06:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.852	92.305	102.052	92.954	92.088	91.638	88.977	87.931	89.124	88.925
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.203	87.103	87.461	89.147	87.668	82.548	82.334	82.478	91.287	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.144	88.066	85.424	83.766	81.560	82.165	81.162	22.972	22.987

05/29/89 06:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.882	92.320	102.052	92.985	92.088	91.669	88.992	87.946	89.155	88.956
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.203	87.118	87.461	89.163	87.668	82.563	82.303	82.494	91.303	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.144	88.066	85.424	83.719	81.978	82.235	81.512	22.973	22.987

05/29/89 06:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.913	92.351	102.052	93.000	92.119	91.715	89.008	87.977	89.155	88.956
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.219	87.118	87.476	89.178	87.699	82.579	82.350	82.509	91.318	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.160	88.066	85.424	83.533	81.932	82.118	81.255	22.974	22.988

05/29/89 06:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.929	92.367	102.052	93.031	92.150	91.715	89.039	87.993	89.170	88.987
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.234	87.134	87.476	89.194	87.714	82.579	82.365	82.525	91.318	90.894
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.160	88.066	85.424	84.068	82.141	82.351	81.675	22.974	22.989

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 07:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.960	92.413	102.052	93.047	92.181	91.715	89.054	88.008	89.170	89.003
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.250	87.165	87.492	89.209	87.729	82.594	82.380	82.540	91.303	90.909
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.175	88.066	85.424	83.929	81.978	82.421	81.512	22.975	22.990

05/29/89 07:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
91.975	92.429	102.052	93.078	92.196	91.746	89.070	88.070	89.186	89.003
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.265	87.165	87.507	89.240	87.745	82.594	82.396	82.540	91.318	90.909
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.769	96.175	88.066	85.424	83.882	82.187	82.142	81.698	22.976	22.991

05/29/89 07:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.006	92.444	102.052	93.093	92.227	91.777	89.101	88.039	89.201	89.018
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.296	87.180	87.523	89.225	87.760	82.610	82.411	82.556	91.318	90.909
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.175	88.066	85.424	83.905	82.001	82.281	81.675	22.976	22.991

05/29/89 07:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.022	92.475	102.052	93.124	92.258	91.793	89.101	88.070	89.217	89.049
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.312	87.196	87.538	89.256	87.760	82.625	82.427	82.571	91.318	90.940
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.191	88.066	85.424	83.510	81.443	82.281	81.046	22.980	22.991

05/29/89 08:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.053	92.506	102.052	93.155	92.258	91.808	89.132	88.085	89.248	89.049
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.312	87.196	87.554	89.256	87.776	82.641	82.442	82.571	91.318	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.191	88.066	85.424	83.990	82.211	82.445	81.605	22.981	22.991

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 08:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.053	92.522	102.052	93.170	92.290	91.839	89.147	88.101	89.279	89.080
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.327	87.211	87.554	89.287	87.791	82.656	82.442	82.587	91.318	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.191	88.066	85.424	83.882	82.071	82.491	81.395	22.982	22.992

05/29/89 08:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.084	92.537	102.052	93.201	92.336	91.839	89.163	88.116	89.294	89.095
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.343	87.211	87.554	89.271	87.807	82.656	82.458	82.602	91.334	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.206	88.066	85.424	84.022	82.187	82.095	81.582	22.983	22.993

05/29/89 08:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.115	92.568	102.052	93.217	92.336	91.870	89.178	88.132	89.310	89.111
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.374	87.242	87.585	89.271	87.822	82.671	82.458	82.617	91.349	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.206	88.066	85.424	84.022	82.048	82.561	81.628	22.983	22.994

05/29/89 09:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.130	92.584	102.052	93.232	92.352	91.917	89.194	88.147	89.341	89.111
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.374	87.242	87.585	89.302	87.838	82.687	82.473	82.617	91.349	90.925
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.206	88.066	85.424	84.091	82.071	82.258	81.675	22.984	22.995

05/29/89 09:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.146	92.615	102.052	93.263	92.383	91.948	89.209	88.178	89.356	89.142
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.389	87.258	87.600	89.302	87.853	82.702	82.504	82.633	91.349	90.940
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.206	88.066	85.424	83.766	81.932	82.142	81.302	22.986	22.995

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 09:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.177	92.630	102.052	93.279	92.414	91.963	89.225	88.194	89.372	89.157
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.420	87.273	87.616	89.318	87.869	82.702	82.504	82.664	91.349	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.222	88.066	85.424	83.766	81.862	82.538	81.162	22.987	22.996

05/29/89 09:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.192	92.646	102.052	93.294	92.414	91.963	89.255	88.194	89.403	89.173
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.420	87.289	87.631	89.302	87.884	82.718	82.504	82.664	91.349	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.784	96.222	88.066	85.424	83.882	82.071	82.305	81.372	22.988	22.997

05/29/89 10:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.239	92.661	102.052	93.325	92.460	91.979	89.271	88.209	89.403	89.188
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.451	87.289	87.647	89.349	87.899	82.733	82.535	82.679	91.365	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.237	88.066	85.424	83.789	81.978	82.188	81.325	22.988	22.997

05/29/89 10:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.239	92.677	102.052	93.325	92.445	92.010	89.286	88.224	89.433	89.188
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.451	87.319	87.647	89.364	87.899	82.749	82.550	82.679	91.349	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.237	88.066	85.424	83.766	81.792	82.398	81.209	22.989	22.998

05/29/89 10:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.254	92.692	102.052	93.356	92.476	92.025	89.302	88.255	89.449	89.204
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.467	87.319	87.647	89.380	87.915	82.749	82.550	82.695	91.365	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.237	88.066	85.424	84.184	82.373	82.351	81.815	22.990	22.999

ATTACHMENT 3.3A

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
MEASURED INPUT DATA

05/29/89 10:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.285	92.707	102.052	93.372	92.491	92.056	89.317	88.271	89.480	89.219
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.482	87.335	87.662	89.380	87.930	82.764	82.566	82.695	91.365	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.800	96.237	88.066	85.424	84.184	81.908	82.608	81.302	22.991	22.999

05/29/89 11:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.285	92.723	102.052	93.387	92.476	92.056	89.333	88.286	89.480	89.250
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.497	87.350	87.678	89.411	87.930	82.780	82.566	82.710	91.380	90.956
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.815	96.268	88.066	85.424	84.324	82.373	82.281	81.861	22.992	23.000

ATTACHMENT 3.3B

River Bend - 1989 ILRT

FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89

REDUCED INPUT VARIABLES V1 - Containment V2 - Drywell

Time (hh:mm)	Volume(V1) (Cu.Ft.)	Press.(V1) (PSIA)	V.P.(V1) (PSI)	Temp.(V1) (R)	Dewp.(V1) (F)	Mass(V1) (LbM)	Press.(V2) (PSIA)	V.P.(V2) (PSI)	Temp.(V2) (R)	Dewp.(V2) (F)	Mass(V2) (LbM)	Total Mas (LbM)
11:00	1192407.00	22.925	0.5298	548.398	81.361	131434.97	22.939	0.5201	554.304	80.790	25695.85	157130.8
11:15	1192407.00	22.926	0.5306	548.416	81.407	131431.99	22.940	0.5181	554.308	80.673	25699.07	157131.0
11:30	1192407.00	22.926	0.5304	548.422	81.396	131431.52	22.940	0.5167	554.315	80.592	25700.29	157131.8
11:45	1192407.00	22.927	0.5298	548.444	81.361	131435.73	22.941	0.5191	554.323	80.731	25698.37	157134.1
12:00	1192407.00	22.927	0.5258	548.457	81.128	131456.17	22.941	0.5161	554.323	80.556	25701.75	157157.9
12:15	1192407.00	22.928	0.5310	548.467	81.430	131429.17	22.942	0.5220	554.323	80.906	25696.13	157125.3
12:30	1192407.00	22.929	0.5264	548.479	81.163	131459.08	22.942	0.5078	554.300	80.056	25713.59	157172.6
12:45	1192407.00	22.930	0.5336	548.486	81.582	131420.78	22.943	0.5175	554.288	80.638	25704.11	157124.8
13:00	1192407.00	22.930	0.5326	548.496	81.523	131424.41	22.943	0.5193	554.276	80.743	25702.63	157127.0
13:15	1192407.00	22.930	0.5256	548.514	81.117	131461.32	22.943	0.5169	554.264	80.603	25705.88	157167.2
13:30	1192407.00	22.931	0.5361	548.523	81.721	131403.68	22.944	0.5195	554.264	80.755	25704.10	157107.7
13:45	1192407.00	22.931	0.5316	548.539	81.465	131425.99	22.945	0.5183	554.260	80.685	25706.80	157132.7
14:00	1192407.00	22.931	0.5350	548.545	81.663	131404.40	22.945	0.5214	554.256	80.871	25703.35	157107.7
14:15	1192407.00	22.931	0.5361	548.554	81.721	131396.25	22.945	0.5234	554.264	80.987	25700.72	157096.9
14:30	1192407.00	22.931	0.5292	548.563	81.326	131434.34	22.946	0.5161	554.260	80.557	25710.41	157144.7
14:45	1192407.00	22.932	0.5359	548.571	81.709	131399.32	22.946	0.5183	554.264	80.685	25707.75	157107.0
15:00	1192407.00	22.933	0.5367	548.582	81.756	131397.86	22.947	0.5219	554.252	80.895	25705.37	157103.2
15:15	1192407.00	22.933	0.5342	548.598	81.617	131408.22	22.948	0.5230	554.252	80.963	25705.21	157113.4
15:30	1192407.00	22.933	0.5413	548.610	82.023	131363.68	22.949	0.5230	554.260	80.965	25705.95	157069.6
15:45	1192407.00	22.934	0.5320	548.623	81.489	131421.13	22.949	0.5232	554.256	80.976	25705.90	157127.0
16:00	1192407.00	22.935	0.5334	548.626	81.570	131417.84	22.949	0.5230	554.260	80.965	25705.95	157123.7
16:15	1192407.00	22.935	0.5403	548.639	81.965	131374.53	22.950	0.5250	554.264	81.081	25704.63	157079.1
16:30	1192407.00	22.935	0.5381	548.649	81.837	131385.08	22.950	0.5225	554.271	80.935	25707.14	157092.2
16:45	1192407.00	22.936	0.5379	548.651	81.826	131391.66	22.951	0.5258	554.267	81.127	25704.69	157096.3
17:00	1192407.00	22.936	0.5426	548.675	82.093	131358.59	22.951	0.5268	554.264	81.185	25703.73	157062.3
17:15	1192407.00	22.936	0.5459	548.683	82.279	131337.34	22.951	0.5266	554.267	81.174	25703.77	157041.1
17:30	1192407.00	22.937	0.5422	548.692	82.070	131362.66	22.952	0.5258	554.267	81.127	25705.84	157068.5
17:45	1192407.00	22.937	0.5340	548.700	81.605	131408.29	22.952	0.5193	554.275	80.743	25712.97	157121.2
18:00	1192407.00	22.937	0.5424	548.717	82.081	131355.47	22.953	0.5274	554.271	81.221	25704.96	157060.4
18:15	1192407.00	22.938	0.5371	548.726	81.779	131390.21	22.953	0.5260	554.275	81.139	25706.40	157096.6
18:30	1192407.00	22.938	0.5342	548.739	81.617	131403.62	22.954	0.5226	554.287	80.941	25710.88	157114.5
18:45	1192407.00	22.939	0.5417	548.750	82.047	131363.02	22.954	0.5284	554.287	81.279	25704.26	157067.2
19:00	1192407.00	22.939	0.5446	548.763	82.209	131342.90	22.955	0.5260	554.287	81.139	25708.14	157051.0
19:15	1192407.00	22.940	0.5469	548.776	82.338	131332.42	22.955	0.5288	554.287	81.303	25704.95	157037.3
19:30	1192407.00	22.940	0.5373	548.789	81.791	131385.66	22.956	0.5226	554.290	80.941	25713.01	157098.6
19:45	1192407.00	22.941	0.5393	548.804	81.907	131376.15	22.956	0.5258	554.291	81.128	25709.34	157085.5
20:00	1192407.00	22.941	0.5369	548.821	81.767	131386.39	22.957	0.5250	554.298	81.082	25711.05	157097.4
20:15	1192407.00	22.942	0.5473	548.831	82.361	131328.64	22.958	0.5296	554.294	81.349	25707.11	157035.7
20:30	1192407.00	22.943	0.5483	548.843	82.418	131325.63	22.958	0.5330	554.298	81.548	25703.01	157028.6
20:45	1192407.00	22.943	0.5401	548.853	81.954	131371.23	22.959	0.5272	554.294	81.209	25711.01	157082.2
21:00	1192407.00	22.944	0.5399	548.867	81.942	131374.97	22.959	0.5264	554.306	81.162	25711.40	157086.3
21:15	1192407.00	22.944	0.5395	548.882	81.918	131373.75	22.960	0.5278	554.306	81.245	25710.93	157084.6
21:30	1192407.00	22.945	0.5461	548.887	82.291	131340.06	22.961	0.5290	554.306	81.314	25710.70	157050.7
21:45	1192407.00	22.945	0.5436	548.906	82.151	131349.84	22.961	0.5272	554.306	81.209	25712.78	157062.6
22:00	1192407.00	22.947	0.5430	548.929	82.117	131359.75	22.962	0.5298	554.321	81.361	25710.22	157069.9
22:15	1192407.00	22.948	0.5473	548.938	82.361	131338.20	22.963	0.5310	554.310	81.430	25710.52	157048.7
22:30	1192407.00	22.949	0.5485	548.958	82.430	131331.93	22.963	0.5308	554.317	81.419	25710.40	157042.3
22:45	1192407.00	22.950	0.5467	548.971	82.326	131345.61	22.964	0.5282	554.321	81.267	25714.34	157059.9
23:00	1192407.00	22.950	0.5518	548.991	82.617	131310.49	22.964	0.5332	554.321	81.559	25708.59	157019.0
23:15	1192407.00	22.951	0.5430	549.007	82.117	131364.57	22.965	0.5290	554.325	81.314	25714.39	157078.9
23:30	1192407.00	22.951	0.5438	549.026	82.162	131355.30	22.966	0.5310	554.329	81.430	25713.05	157068.3
23:45	1192407.00	22.952	0.5500	549.038	82.512	131322.03	22.967	0.5306	554.329	81.407	25714.66	157036.6
00:00	1192407.00	22.953	0.5458	549.061	82.279	131346.67	22.967	0.5304	554.341	81.396	25714.36	157061.0
00:15	1192407.00	22.954	0.5477	549.070	82.383	131339.39	22.967	0.5339	554.341	81.594	25710.43	157049.8
00:30	1192407.00	22.954	0.5395	549.094	81.919	131381.73	22.968	0.5226	554.341	80.941	25724.44	157106.1
00:45	1192407.00	22.955	0.5430	549.113	82.117	131362.56	22.970	0.5282	554.348	81.267	25719.97	157082.5
01:00	1192407.00	22.956	0.5503	549.131	82.531	131321.35	22.970	0.5256	554.344	81.116	25723.12	157044.4
01:15	1192407.00	22.957	0.5477	549.150	82.384	131337.72	22.971	0.5302	554.352	81.384	25718.63	157056.3

ATTACHMENT 3.3B

River Bend - 1989 ILRT

FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89

REDUCED INPUT VARIABLES V1 - Containment V2 - Drywell

Time (hh:mm)	Volume(V1) (Cu.Ft.)	Press.(V1) (PSIA)	V.P.(V1) (PSI)	Temp.(V1) (R)	Dewp.(V1) (F)	Mass(V1) (LbM)	Press.(V2) (PSIA)	V.P.(V2) (PSI)	Temp.(V2) (R)	Dewp.(V2) (F)	Mass(V2) (LbM)	Total Mas (LbM)
01:30	1192407.00	22.957	0.5424	549.170	82.082	131364.39	22.972	0.5306	554.364	81.407	25718.78	157083.1
01:45	1192407.00	22.958	0.5432	549.187	82.128	131361.26	22.973	0.5266	554.337	81.174	25725.74	157087.0
02:00	1192407.00	22.958	0.5465	549.211	82.314	131336.44	22.973	0.5312	554.364	81.442	25719.23	157055.6
02:15	1192407.00	22.960	0.5456	549.229	82.267	131348.50	22.974	0.5320	554.368	81.489	25719.26	157067.7
02:30	1192407.00	22.960	0.5496	549.245	82.488	131321.80	22.974	0.5310	554.368	81.430	25720.43	157042.2
02:45	1192407.00	22.961	0.5465	549.270	82.314	131339.80	22.976	0.5312	554.375	81.442	25722.14	157061.9
03:00	1192407.00	22.962	0.5535	549.286	82.710	131300.59	22.977	0.5359	554.403	81.710	25716.69	157017.2
03:15	1192407.00	22.962	0.5502	549.307	82.523	131315.09	22.977	0.5324	554.387	81.512	25721.36	157036.4
03:30	1192407.00	22.964	0.5531	549.325	82.686	131305.44	22.978	0.5367	554.383	81.757	25717.81	157023.2
03:45	1192407.00	22.965	0.5541	549.348	82.744	131299.8[illegible]	22.979	0.5379	554.387	81.827	25717.37	157017.2
04:00	1192407.00	22.965	0.5502	549.361	82.523	131319.79	22.980	0.5345	554.387	81.629	25722.48	157042.2
04:15	1192407.00	22.966	0.5577	549.390	82.942	131274.74	22.980	0.5369	554.391	81.769	25719.51	156994.2
04:30	1192407.00	22.967	0.5516	549.403	82.605	131313.04	22.981	0.5349	554.395	81.652	25722.81	157035.8
04:45	1192407.00	22.967	0.5515	549.423	82.600	131308.61	22.981	0.5324	554.395	81.513	25725.58	157034.1
05:00	1192407.00	22.969	0.5473	549.449	82.361	131339.00	22.983	0.5326	554.407	81.524	25727.09	157066.0
05:15	1192407.00	22.969	0.5483	549.465	82.418	131329.19	22.984	0.5330	554.410	81.547	25727.61	157056.7
05:30	1192407.00	22.970	0.5583	549.483	82.977	131272.40	22.985	0.5389	554.406	81.885	25722.19	156994.5
05:45	1192407.00	22.971	0.5579	549.510	82.953	131274.15	22.986	0.5347	554.406	81.641	25728.23	157002.3
06:00	1192407.00	22.972	0.5527	549.522	82.663	131307.63	22.987	0.5351	554.414	81.663	25728.55	157036.1
06:15	1192407.00	22.973	0.5560	549.539	82.849	131289.97	22.987	0.5387	554.418	81.874	25724.17	157014.1
06:30	1192407.00	22.974	0.5539	549.564	82.733	131302.12	22.988	0.5355	554.426	81.686	25728.69	157030.8
06:45	1192407.00	22.974	0.5606	549.581	83.105	131258.86	22.989	0.5412	554.426	82.013	25723.30	156982.1
07:00	1192407.00	22.975	0.5579	549.602	82.953	131275.57	22.990	0.5403	554.430	81.966	25725.21	157000.7
07:15	1192407.00	22.976	0.5593	549.621	83.035	131268.49	22.991	0.5395	554.434	81.920	25727.11	156995.6
07:30	1192407.00	22.976	0.5579	549.639	82.953	131272.63	22.991	0.5405	554.437	81.978	25725.77	156998.4
07:45	1192407.00	22.980	0.5493	549.661	82.477	131340.89	22.991	0.5351	554.449	81.663	25731.51	157072.4
08:00	1192407.00	22.981	0.5606	549.679	83.105	131276.34	22.991	0.5414	554.445	82.025	25724.46	157000.8
08:15	1192407.00	22.982	0.5583	549.696	82.977	131291.63	22.992	0.5399	554.445	81.943	25727.25	157018.8
08:30	1192407.00	22.983	0.5606	549.714	83.105	131279.72	22.993	0.5381	554.453	81.838	25730.13	157009.8
08:45	1192407.00	22.983	0.5594	549.734	83.035	131282.29	22.994	0.5426	554.457	82.095	25725.96	157008.2
09:00	1192407.00	22.984	0.5602	549.752	83.081	131279.11	22.995	0.5403	554.457	81.966	25729.68	157008.7
09:15	1192407.00	22.986	0.5560	549.775	82.849	131309.78	22.995	0.5361	554.465	81.722	25734.21	157043.9
09:30	1192407.00	22.987	0.5554	549.794	82.814	131314.78	22.996	0.5383	554.473	81.850	25732.43	157047.2
09:45	1192407.00	22.988	0.5583	549.804	82.977	131301.01	22.997	0.5381	554.469	81.839	25733.99	157034.9
10:00	1192407.00	22.988	0.5566	549.829	82.883	131304.79	22.997	0.5367	554.480	81.757	25735.08	157039.8
10:15	1192407.00	22.989	0.5547	549.838	82.779	131319.52	22.998	0.5375	554.476	81.803	25735.48	157055.0
10:30	1192407.00	22.990	0.5638	549.855	83.279	131268.60	22.999	0.5424	554.480	82.083	25730.83	156999.4
10:45	1192407.00	22.991	0.5596	549.874	83.046	131294.65	22.999	0.5401	554.480	81.955	25733.40	157028.0
11:00	1192407.00	22.992	0.5650	549.882	83.349	131266.45	23.000	0.5422	554.496	82.071	25731.51	156997.9

ATTACHMENT 3.3C

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
ABSOLUTE TEST METHOD, MASS POINT ANALYSIS TEST RESULTS

Time (hh:mm)	Mass (LbM)	Leakage (PCT./DAY)	Confidence (PCT./DAY)	UCL (PCT./DAY)
11:00	157130.83	0.000000	0.000000	0.000000
11:15	157131.06	0.000000	0.000000	0.000000
11:30	157131.80	-0.029896	0.077032	0.047137
11:45	157134.10	-0.064562	0.060067	-0.004495
12:00	157157.92	-0.349683	0.388584	0.038901
12:15	157125.30	-0.096403	0.387576	0.291173
12:30	157172.67	-0.305742	0.355547	0.049805
12:45	157124.89	-0.124206	0.326774	0.202568
13:00	157127.04	-0.039963	0.263427	0.223465
13:15	157167.20	-0.128745	0.227222	0.098477
13:30	157107.78	-0.006294	0.224143	0.217848
13:45	157132.78	0.005828	0.184832	0.190660
14:00	157107.75	0.063374	0.165882	0.229256
14:15	157096.97	0.116557	0.151224	0.267780
14:30	157144.76	0.075228	0.136821	0.212049
14:45	157107.07	0.096700	0.120982	0.217682
15:00	157103.23	0.114139	0.107651	0.221790
15:15	157113.43	0.113448	0.095262	0.208710
15:30	157069.64	0.153399	0.093902	0.247301
15:45	157127.04	0.130223	0.087357	0.217581
16:00	157123.79	0.113955	0.080450	0.194406
16:15	157079.16	0.132714	0.075287	0.208001
16:30	157092.22	0.136870	0.068693	0.205563
16:45	157096.35	0.136177	0.062830	0.199008
17:00	157062.32	0.153569	0.060197	0.213766
17:15	157041.11	0.177008	0.060101	0.237109
17:30	157068.50	0.180926	0.055688	0.236614
17:45	157121.27	0.158911	0.055998	0.214909
18:00	157060.44	0.165674	0.052483	0.218157
18:15	157096.61	0.155850	0.049861	0.205711
18:30	157114.50	0.140256	0.049034	0.189291
18:45	157067.28	0.142999	0.045995	0.188993
19:00	157051.04	0.149812	0.043672	0.193484
19:15	157037.37	0.158947	0.042022	0.200969
19:30	157098.67	0.148018	0.040999	0.189017
19:45	157085.50	0.141769	0.039165	0.180934
20:00	157097.44	0.132761	0.038046	0.170808
20:15	157035.75	0.139821	0.036667	0.176488
20:30	157028.63	0.146983	0.035453	0.182437
20:45	157082.25	0.140605	0.034225	0.174830
21:00	157086.37	0.133749	0.033211	0.166960
21:15	157084.68	0.127725	0.032148	0.159872
21:30	157050.76	0.128668	0.030648	0.159315
21:45	157062.63	0.126902	0.029288	0.156190
22:00	157069.97	0.123694	0.028144	0.151838

ATTACHMENT 3.3C

River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
ABSOLUTE TEST METHOD, MASS POINT ANALYSIS TEST RESULTS

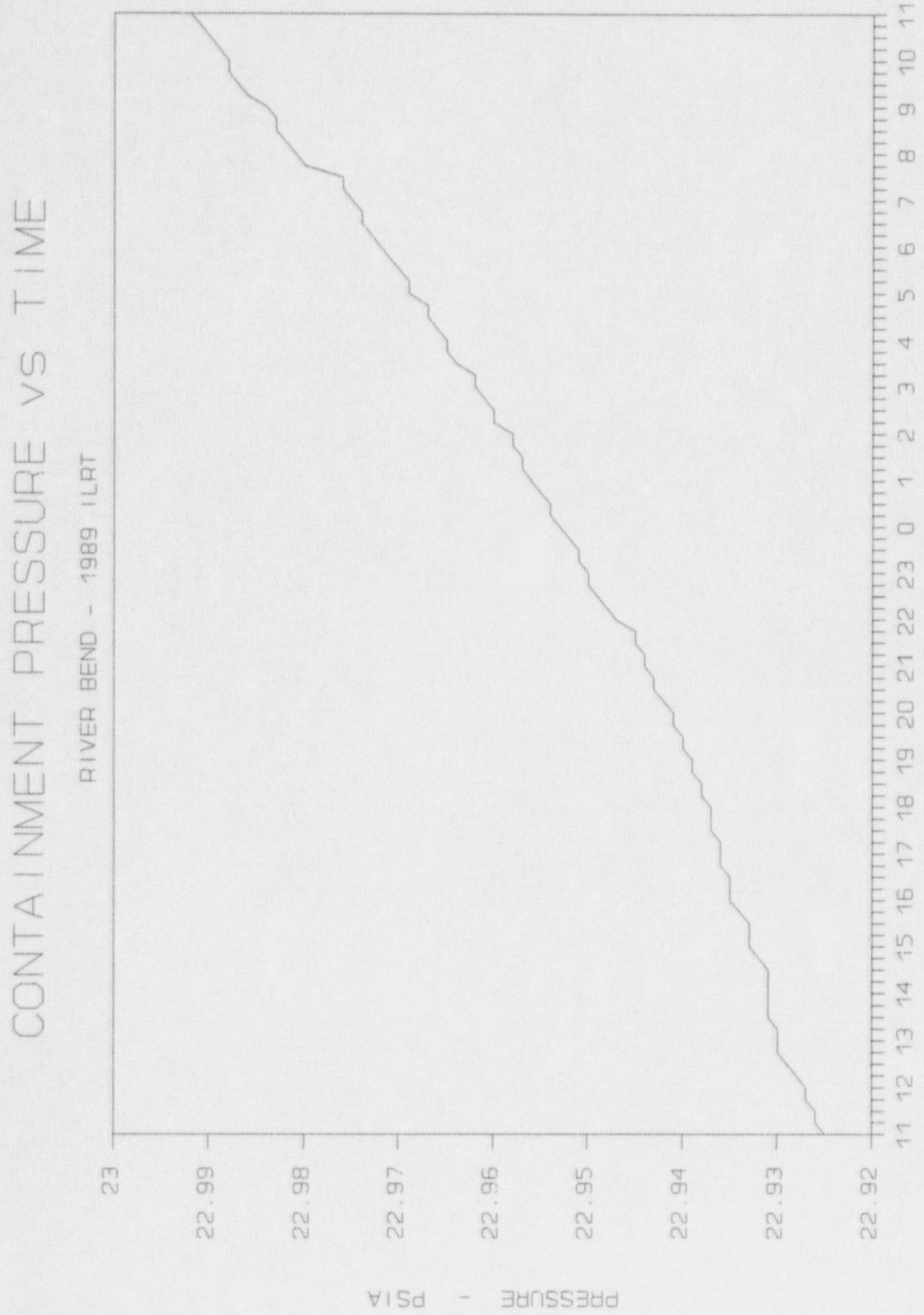
Time (hh:mm)	Mass (LbM)	Leakage (PCT./DAY)	Confidence (PCT./DAY)	UCL (PCT./DAY)
22:15	157048.72	0.124145	0.026910	0.151055
22:30	157042.32	0.125251	0.025774	0.151025
22:45	157059.96	0.123156	0.024772	0.147928
23:00	157019.08	0.127120	0.024058	0.151179
23:15	157078.96	0.121724	0.023671	0.145394
23:30	157068.35	0.118128	0.022998	0.141126
23:45	157036.69	0.118884	0.022117	0.141001
00:00	157061.02	0.116193	0.021433	0.137626
00:15	157049.82	0.114938	0.020667	0.135605
00:30	157106.17	0.106886	0.021376	0.128262
00:45	157082.53	0.102180	0.021102	0.123282
01.00	157044.47	0.101985	0.020356	0.122341
01:15	157056.36	0.100359	0.019710	0.120069
01:30	157083.17	0.095946	0.019508	0.115453
01:45	157087.00	0.091419	0.019352	0.110771
02:00	157055.67	0.090214	0.018748	0.108962
02:15	157067.76	0.087849	0.018281	0.106130
02:30	157042.23	0.087892	0.017696	0.105588
02:45	157061.94	0.086068	0.017229	0.103297
03:00	157017.28	0.088102	0.016809	0.104912
03:15	157036.45	0.088249	0.016297	0.104546
03:30	157023.25	0.089329	0.015841	0.105170
03:45	157017.21	0.090673	0.015426	0.106099
04:00	157042.27	0.089890	0.014994	0.104885
04:15	156994.25	0.092605	0.014796	0.107400
04:30	157035.85	0.092005	0.014387	0.106393
04:45	157034.18	0.091466	0.013995	0.105460
05:00	157066.09	0.088703	0.013866	0.102569
05:15	157056.79	0.086676	0.013629	0.100305
05:30	156994.59	0.088715	0.013408	0.102123
05:45	157002.38	0.090019	0.013112	0.103132
06:00	157036.18	0.089072	0.012802	0.101874
06:15	157014.13	0.089420	0.012476	0.101896
06:30	157030.80	0.088690	0.012179	0.100869
06:45	156982.16	0.090683	0.012026	0.102709
07:00	157000.78	0.091423	0.011749	0.103171
07:15	156995.60	0.092308	0.011492	0.103800
07:30	156998.40	0.092904	0.011228	0.104132
07:45	157072.41	0.089582	0.011414	0.100996
08:00	157000.80	0.090005	0.011152	0.101157
08:15	157018.88	0.089442	0.010904	0.100346
08:30	157009.85	0.089279	0.010653	0.099932
08:45	157008.25	0.089133	0.010411	0.099543
09:00	157008.79	0.088905	0.010178	0.099083
09:15	157043.99	0.087052	0.010108	0.097160

ATTACHMENT 3.3C

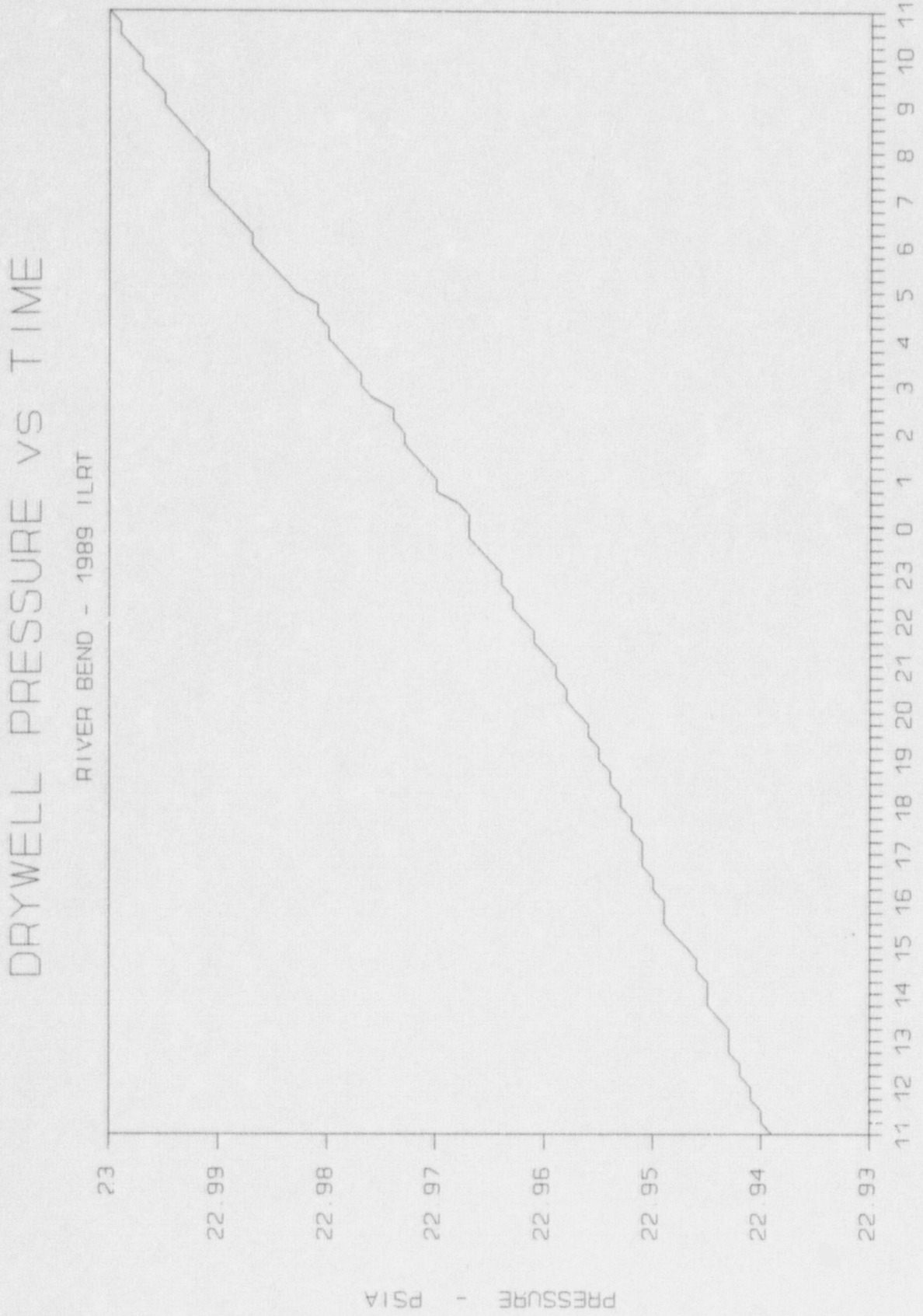
River Bend - 1989 ILRT
FROM 11:00 HOURS ON 05/28/89 TO 11:00 HOURS ON 05/29/89
ABSOLUTE TEST METHOD, MASS POINT ANALYSIS TEST RESULTS

Time (hh:mm)	Mass (LbM)	Leakage (PCT./DAY)	Confidence (PCT./DAY)	UCL (PCT./DAY)
09:30	157047.21	0.085115	0.010058	0.095174
09:45	157034.99	0.083766	0.009923	0.093689
10:00	157039.87	0.082239	0.009819	0.092058
10:15	157055.00	0.080132	0.009819	0.089951
10:30	156999.42	0.080336	0.009613	0.089949
10:45	157028.05	0.079349	0.009460	0.088809
11:00	156997.96	0.079532	0.009265	0.088797

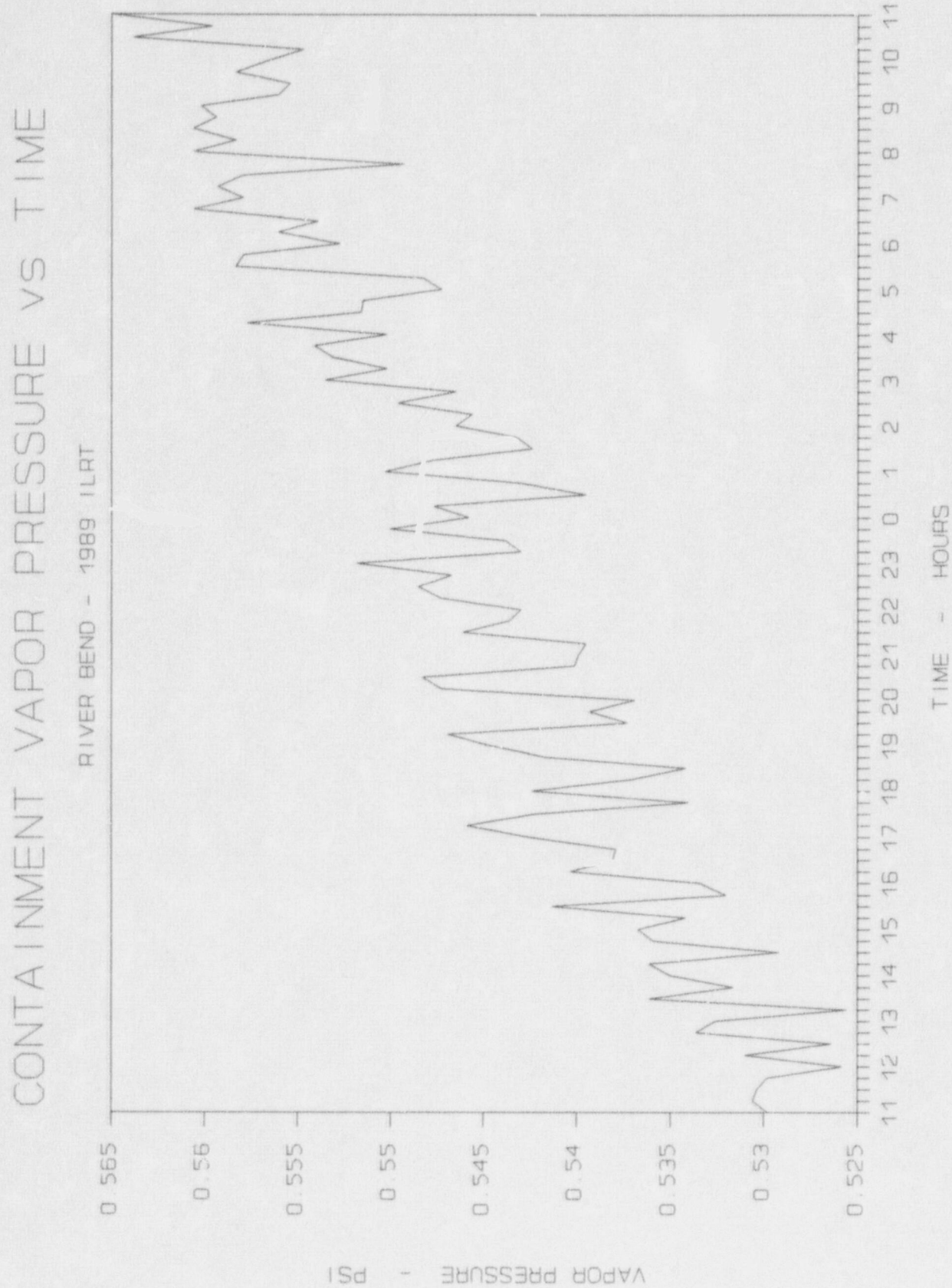
ATTACHMENT 3.3D
GRAPH 1



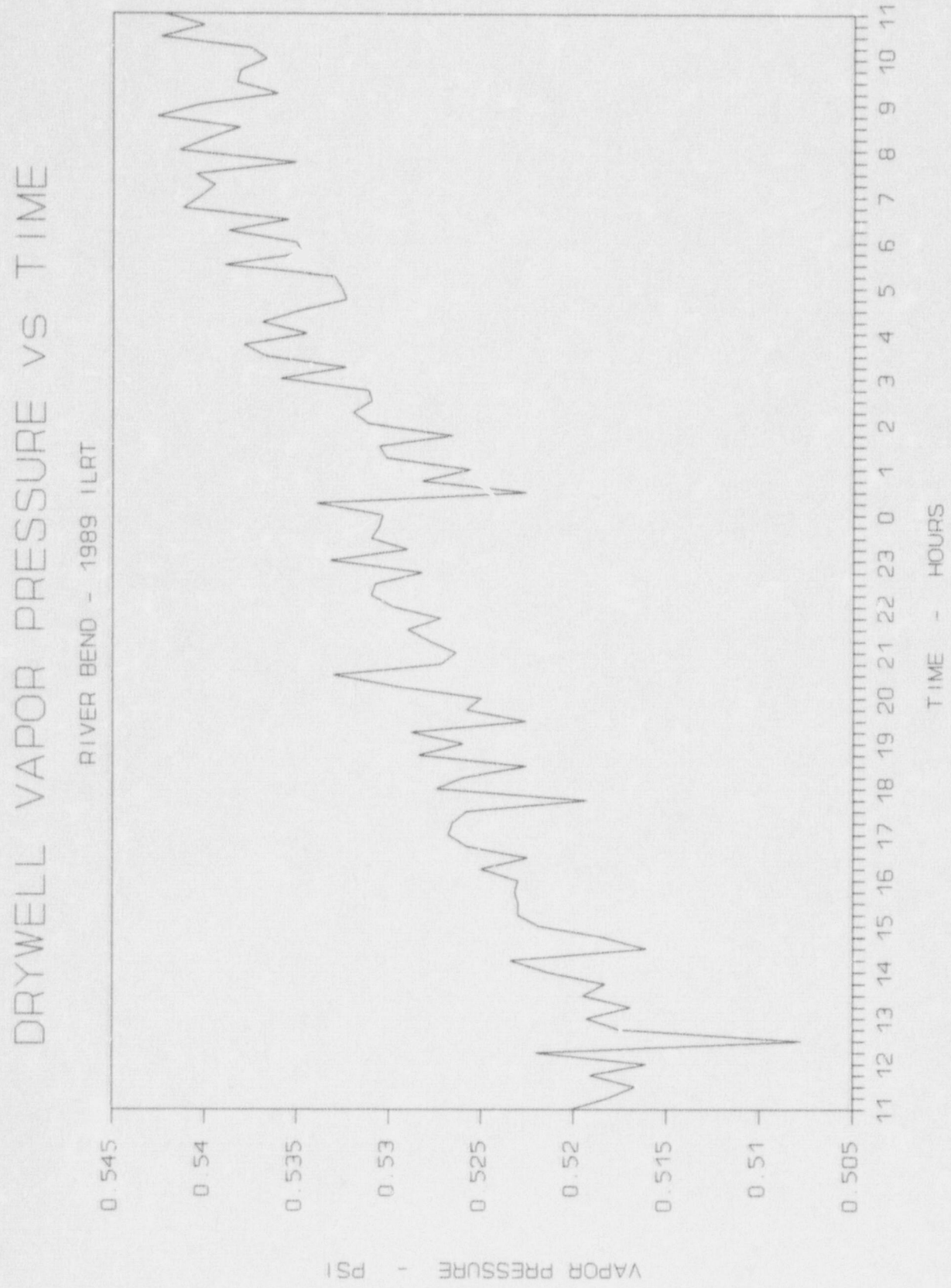
ATTACHMENT 3.3E
GRAPH 2



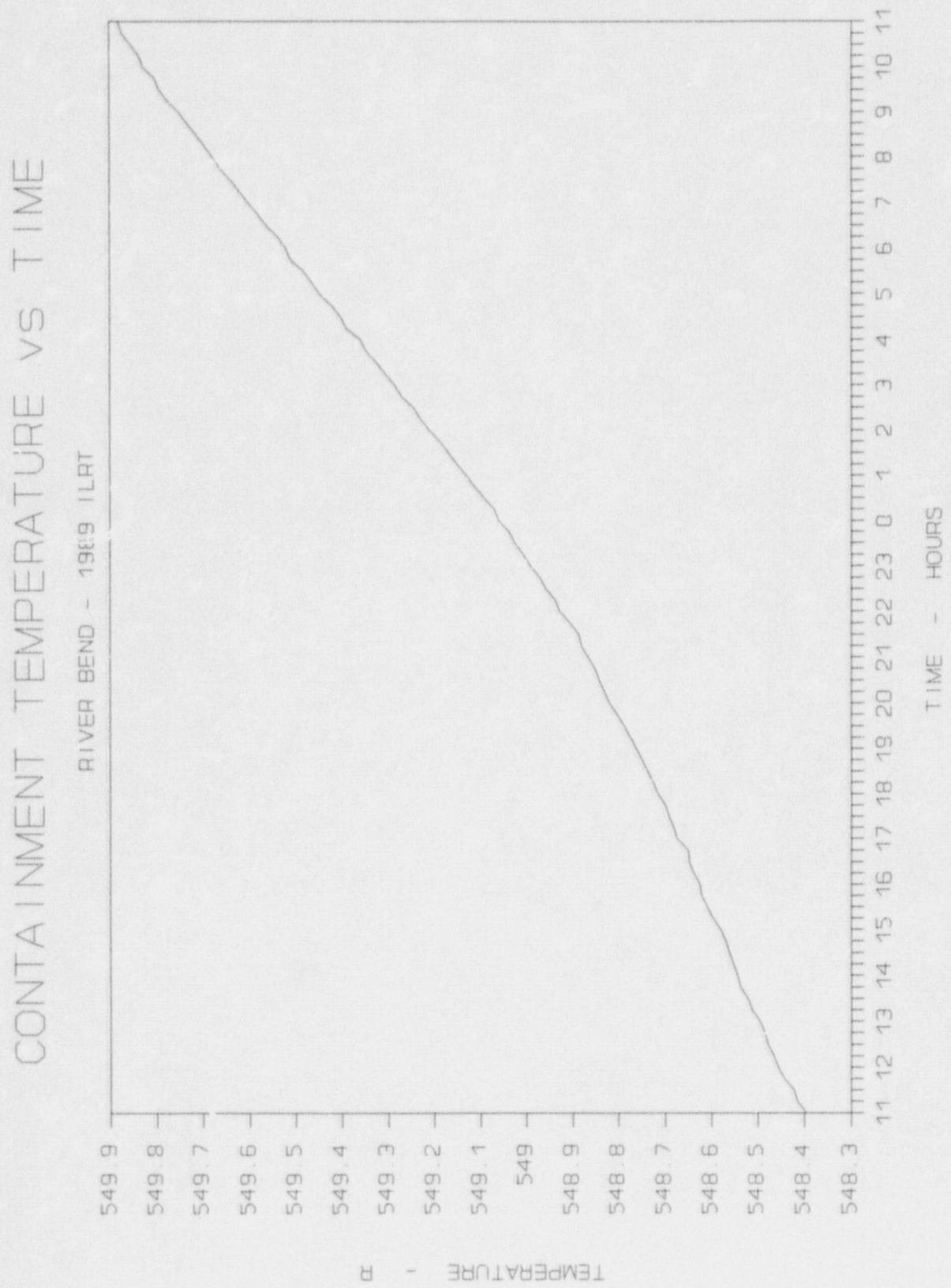
ATTACHMENT 3.3F
GRAPH 3



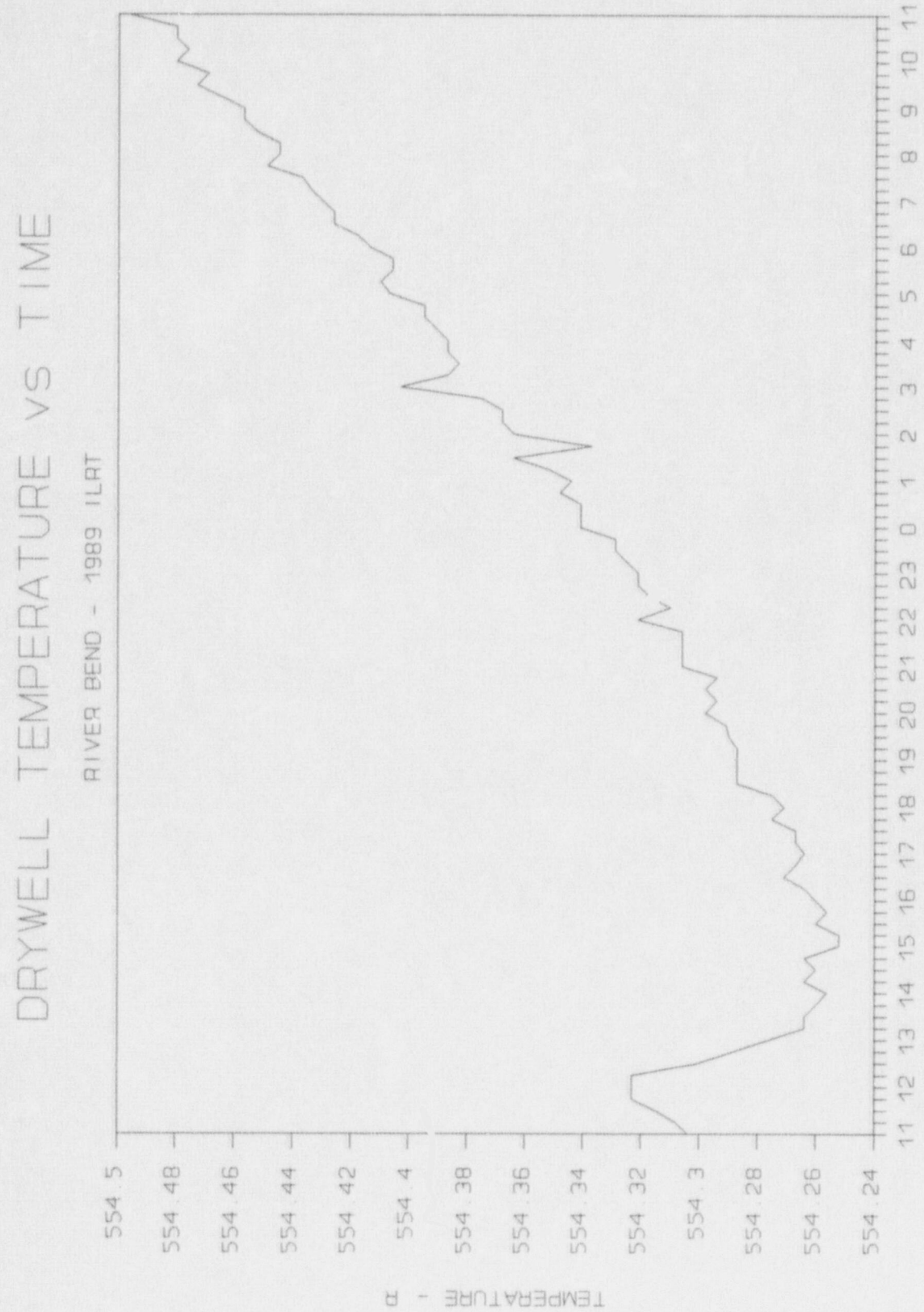
ATTACHMENT 3.3G
GRAPH 4



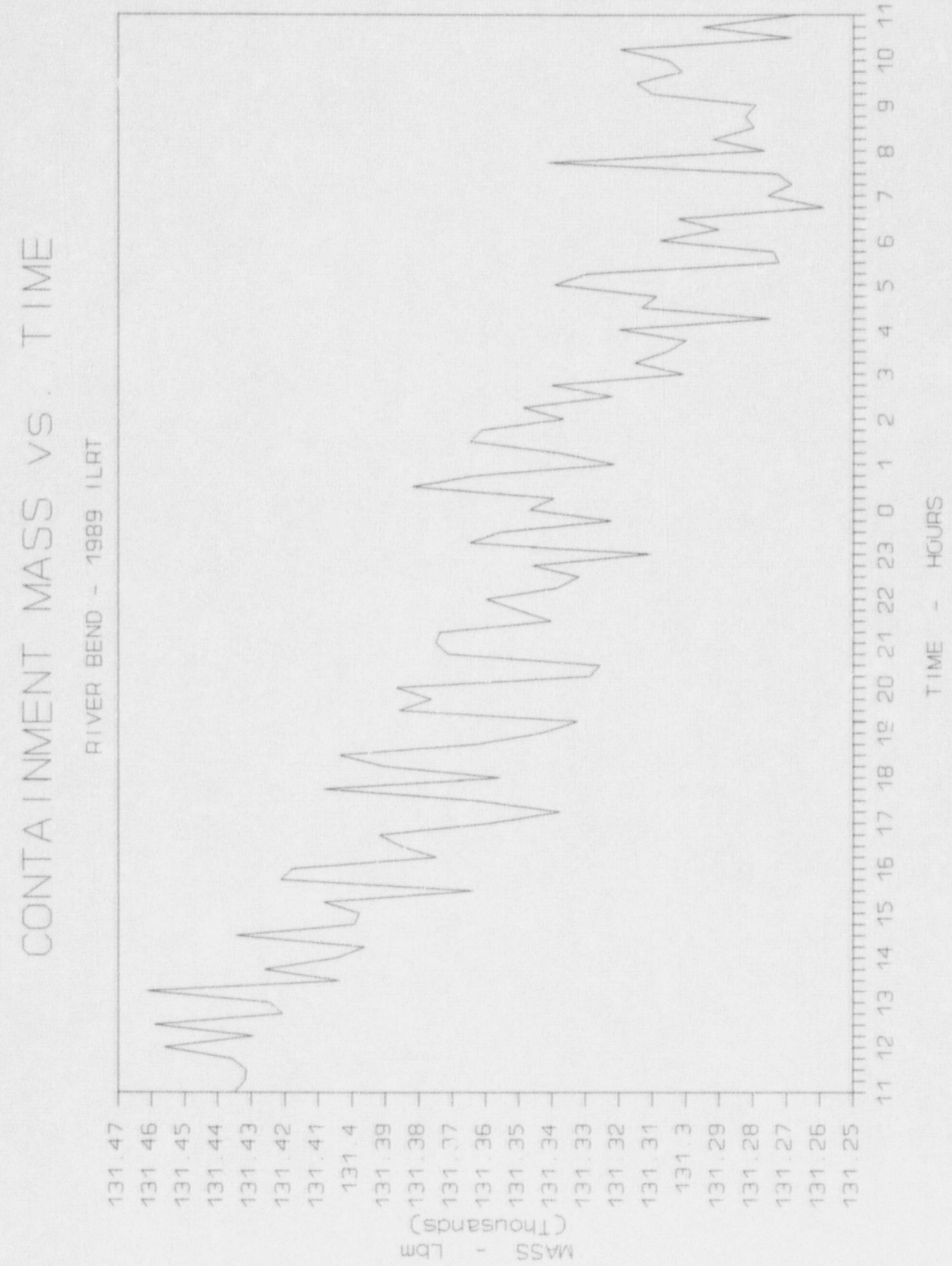
ATTACHMENT 3.3H
GRAPH 5



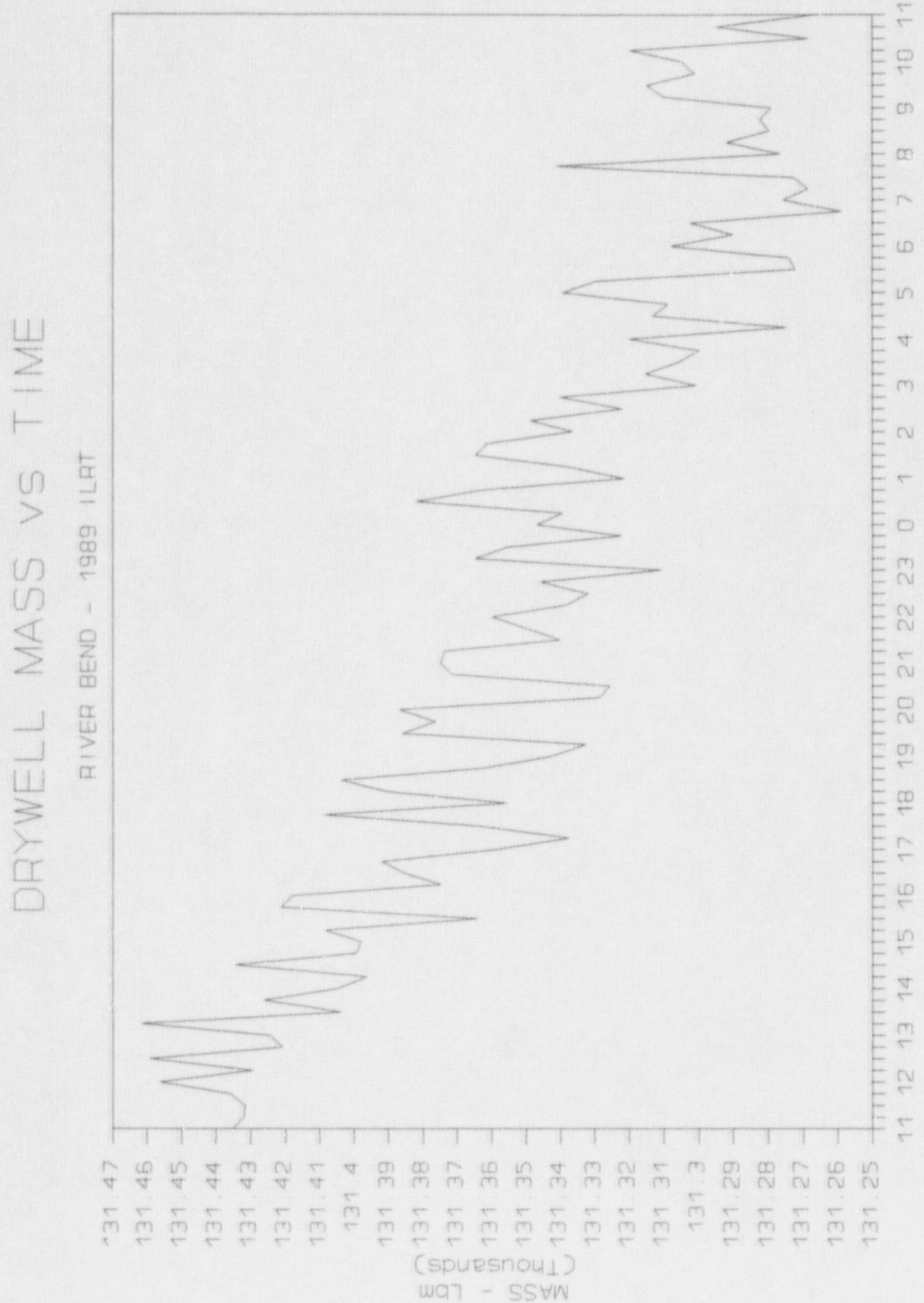
ATTACHMENT 3.3I
GRAPH 6



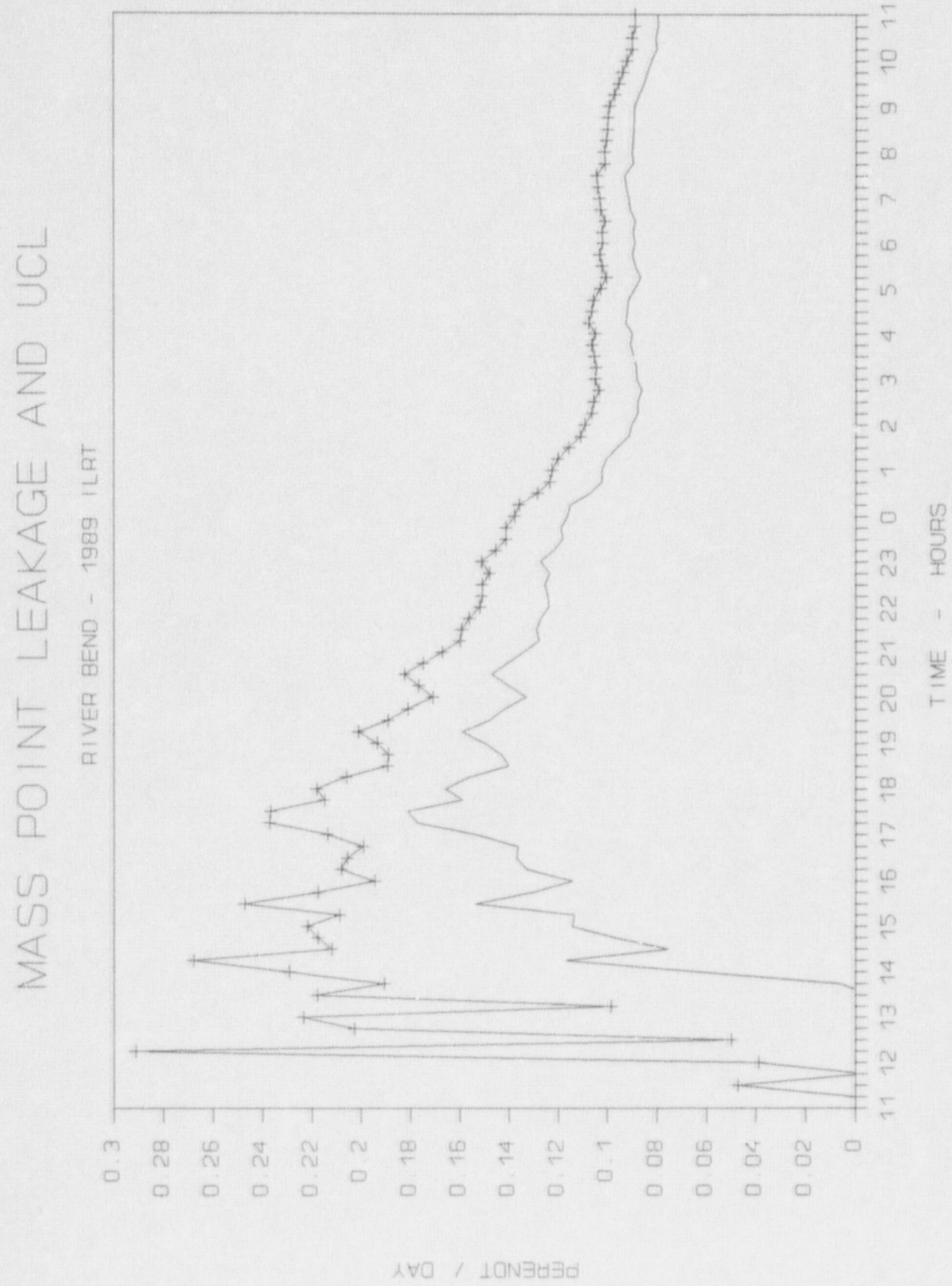
ATTACHMENT 3.3J
GRAPH 7



ATTACHMENT 3.3K
GRAPH 8



ATTACHMENT 3.3L
GRAPH 9



ATTACHMENT 3.3M

River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
MEASURED INPUT DATA
VERIFICATION TEST

05/29/89 12:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.363	92.800	102.052	93.465	92.538	92.103	89.426	88.364	89.557	89.312
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.559	87.412	87.740	89.411	88.039	82.826	82.628	82.772	91.380	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.815	96.284	88.066	85.424	84.022	82.187	82.701	81.698	22.989	23.003

05/29/89 12:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.363	92.816	102.052	93.480	92.569	92.134	89.441	88.379	89.573	89.328
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.575	87.412	87.740	89.411	88.054	82.841	82.643	82.787	91.380	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.815	96.284	88.066	85.424	84.370	82.094	82.002	81.558	22.988	23.003

05/29/89 12:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.378	92.831	102.052	93.496	92.584	92.149	89.457	88.379	89.588	89.343
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.590	87.412	87.755	89.411	88.069	82.841	82.659	82.803	91.380	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.284	88.066	85.424	83.975	81.746	82.398	81.139	22.987	23.003

05/29/89 13:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.409	92.847	102.052	93.511	92.584	92.165	89.472	88.410	89.604	89.358
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.621	87.428	87.770	89.457	88.069	82.857	82.674	82.803	91.396	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.284	88.066	85.424	83.975	81.932	82.328	81.232	22.987	23.003

05/29/89 16:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.409	92.847	102.052	93.527	92.600	92.180	89.488	88.410	89.604	89.374
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.621	87.443	87.786	89.411	88.100	82.872	82.674	82.818	91.396	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.299	88.066	85.424	84.440	82.350	82.491	81.582	22.987	23.003

ATTACHMENT 3.3M

River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
MEASURED INPUT DATA
VERIFICATION TEST

05/29/89 13:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.424	92.862	102.052	93.542	92.615	92.195	89.503	88.456	89.635	89.389
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.637	87.459	87.786	89.441	88.100	82.888	82.705	82.834	91.396	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.299	88.066	85.424	84.231	82.025	82.701	81.558	22.987	23.003

05/29/89 13:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.440	92.862	102.052	93.542	92.631	92.211	89.519	88.456	89.650	89.405
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.652	87.474	87.801	89.472	88.131	82.903	82.705	82.849	91.411	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.299	88.066	85.424	84.370	82.025	82.468	81.442	22.987	23.003

05/29/89 14:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.455	92.878	102.052	93.558	92.615	92.195	89.534	88.456	89.681	89.420
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.668	87.474	87.801	89.441	88.131	82.903	82.720	82.865	91.396	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.299	88.066	85.424	84.464	82.536	82.445	81.838	22.987	23.003

05/29/89 14:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.455	92.893	102.052	93.573	92.631	92.226	89.549	88.487	89.681	89.420
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.683	87.490	87.817	89.472	88.147	82.903	82.736	82.865	91.411	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.315	88.066	85.424	84.231	82.094	82.305	81.535	22.987	23.003

05/29/89 14:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.486	92.893	102.052	93.589	92.646	92.211	89.565	88.487	89.697	89.451
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.683	87.505	87.832	89.472	88.162	82.934	82.736	82.880	91.426	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.315	88.066	85.424	84.394	82.280	82.421	81.745	22.987	23.003

ATTACHMENT 3.3M

River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
MEASURED INPUT DATA
VERIFICATION TEST

05/29/89 14:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.486	92.909	102.052	93.589	92.677	92.242	89.580	88.518	89.712	89.451
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.699	87.505	87.848	89.488	88.178	82.934	82.751	82.896	91.426	90.987
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.315	88.066	85.424	84.324	82.397	82.724	81.745	22.987	23.003

05/29/89 15:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.486	92.924	102.052	93.604	92.677	92.257	89.596	88.534	89.728	89.467
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.714	87.521	87.832	89.519	88.193	82.950	82.767	82.896	91.426	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.330	88.066	85.424	84.161	81.978	82.701	81.582	22.987	23.003

05/29/89 15:15 Vol1 = 1192407 00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.502	92.924	102.052	93.620	92.662	92.273	89.611	88.549	89.743	89.467
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.714	87.536	87.863	89.534	88.209	82.950	82.782	82.911	91.426	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.330	88.066	85.424	83.719	81.932	82.631	81.349	22.987	23.003

05/29/89 15:30 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.502	92.955	102.052	93.635	92.677	92.242	89.627	88.565	89.758	89.498
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.745	87.551	87.879	89.503	88.224	82.981	82.798	82.926	91.426	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.846	96.330	88.066	85.424	84.719	82.699	82.491	82.001	22.988	23.003

05/29/89 15:45 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.502	92.955	102.052	93.635	92.677	92.304	89.642	88.580	89.774	89.498
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.761	87.551	87.879	89.534	88.239	82.965	82.813	82.942	91.426	91.002
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.831	96.346	88.066	85.424	84.370	82.582	82.514	82.048	22.988	23.003

ATTACHMENT 3.3M

River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
MEASURED INPUT DATA
VERIFICATION TEST

05/29/89 16:00 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.517	92.955	102.052	93.650	92.708	92.304	89.658	88.580	89.789	89.529
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.761	87.567	87.894	89.565	88.255	82.996	82.829	82.957	91.442	91.018
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.846	96.346	88.066	85.424	84.347	82.280	82.841	81.722	22.987	23.003

05/29/89 16:15 Vol1 = 1192407.00

T_1A	T_1B	T_1C	T_2A	T_2B	T_2C	T_3A	T_3B	T_3C	T_4A
92.533	92.971	102.052	93.650	92.708	92.304	89.673	88.596	89.789	89.529
T_4B	T_4C	T_5A	T_5B	T_5C	T_6A	T_6B	T_6C	T_7A	T_7B
88.792	87.567	87.894	89.519	88.255	82.996	82.829	82.973	91.442	91.018
T_8A	T_8B	M_1A	M_1B	M_2A	M_2B	M_3A	M_3B	P121	P122
100.846	96.346	88.066	85.424	84.394	82.443	82.561	81.908	22.987	23.003

ATTACHMENT 3.3N

River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
REDUCED INPUT VARIABLES V1 - Containment V2 - Drywell
VERIFICATION TEST

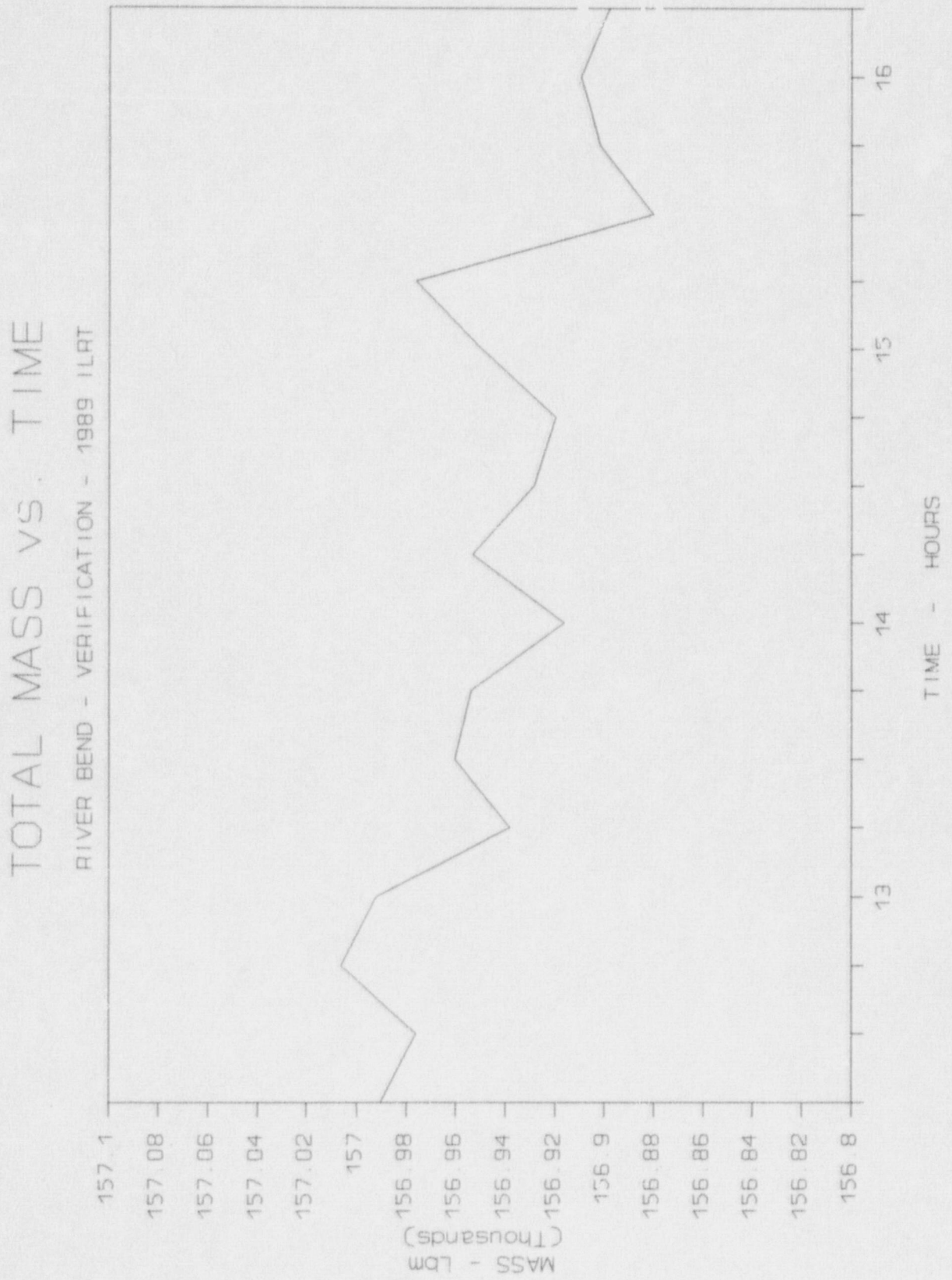
Time (hh:mm)	Volume(V1) (Cu.Ft.)	Press.(V1) (PSIA)	V.P.(V1) (PSI)	Temp.(V1) (R)	Dewp.(V1) (F)	Mass(V1) (LbM)	Press.(V2) (PSIA)	V.P.(V2) (PSI)	Temp.(V2) (R)	Dewp.(V2) (F)	Mass(V2) (LbM)	Total Mas (LbM)
12:15	1192407.00	22.989	0.5606	549.949	83.105	131258.70	23.003	0.5444	554.507	82.200	25731.81	156990.5
12:30	1192407.00	22.988	0.5629	549.964	83.232	131235.82	23.003	0.5371	554.507	81.780	25740.23	156976.0
12:45	1192407.00	22.987	0.5562	549.977	82.861	131266.07	23.003	0.5369	554.511	81.768	25740.28	157006.3
13:00	1192407.00	22.987	0.5579	549.994	82.953	131252.20	23.003	0.5371	554.515	81.780	25739.86	156992.0
13:15	1192407.00	22.987	0.5659	550.001	83.395	131203.67	23.003	0.5416	554.519	82.036	25734.55	156938.2
13:30	1192407.00	22.987	0.5610	550.018	83.128	131228.01	23.003	0.5432	554.519	82.130	25732.68	156960.6
13:45	1192407.00	22.987	0.5623	550.030	83.198	131217.75	23.003	0.5401	554.523	81.955	25736.01	156953.7
14:00	1192407.00	22.987	0.5678	550.036	83.500	131184.08	23.003	0.5434	554.523	82.141	25732.26	156916.3
14:15	1192407.00	22.987	0.5617	550.050	83.162	131216.89	23.003	0.5395	554.531	81.920	25736.35	156953.2
14:30	1192407.00	22.987	0.5648	550.061	83.337	131195.55	23.003	0.5424	554.531	82.083	25733.08	156928.6
14:45	1192407.00	22.987	0.5653	550.075	83.361	131189.74	23.003	0.5451	554.531	82.234	25730.02	156919.7
15:00	1192407.00	22.987	0.5600	550.086	83.070	131218.12	23.003	0.5434	554.538	82.141	25731.55	156949.6
15:15	1192407.00	22.987	0.5556	550.095	82.826	131241.56	23.003	0.5408	554.538	81.990	25734.60	156976.1
15:30	1192407.00	22.988	0.5716	550.106	83.709	131150.90	23.003	0.5453	554.542	82.246	25729.27	156880.1
15:45	1192407.00	22.988	0.5674	550.117	83.476	131173.40	23.003	0.5459	554.542	82.281	25728.54	156901.9
16:00	1192407.00	22.987	0.5644	550.131	83.314	131181.52	23.003	0.5459	554.554	82.281	25727.99	156909.5
16:15	1192407.00	22.987	0.5663	550.136	83.418	131169.12	23.003	0.5451	554.554	82.234	25728.94	156898.0

ATTACHMENT 3.3P

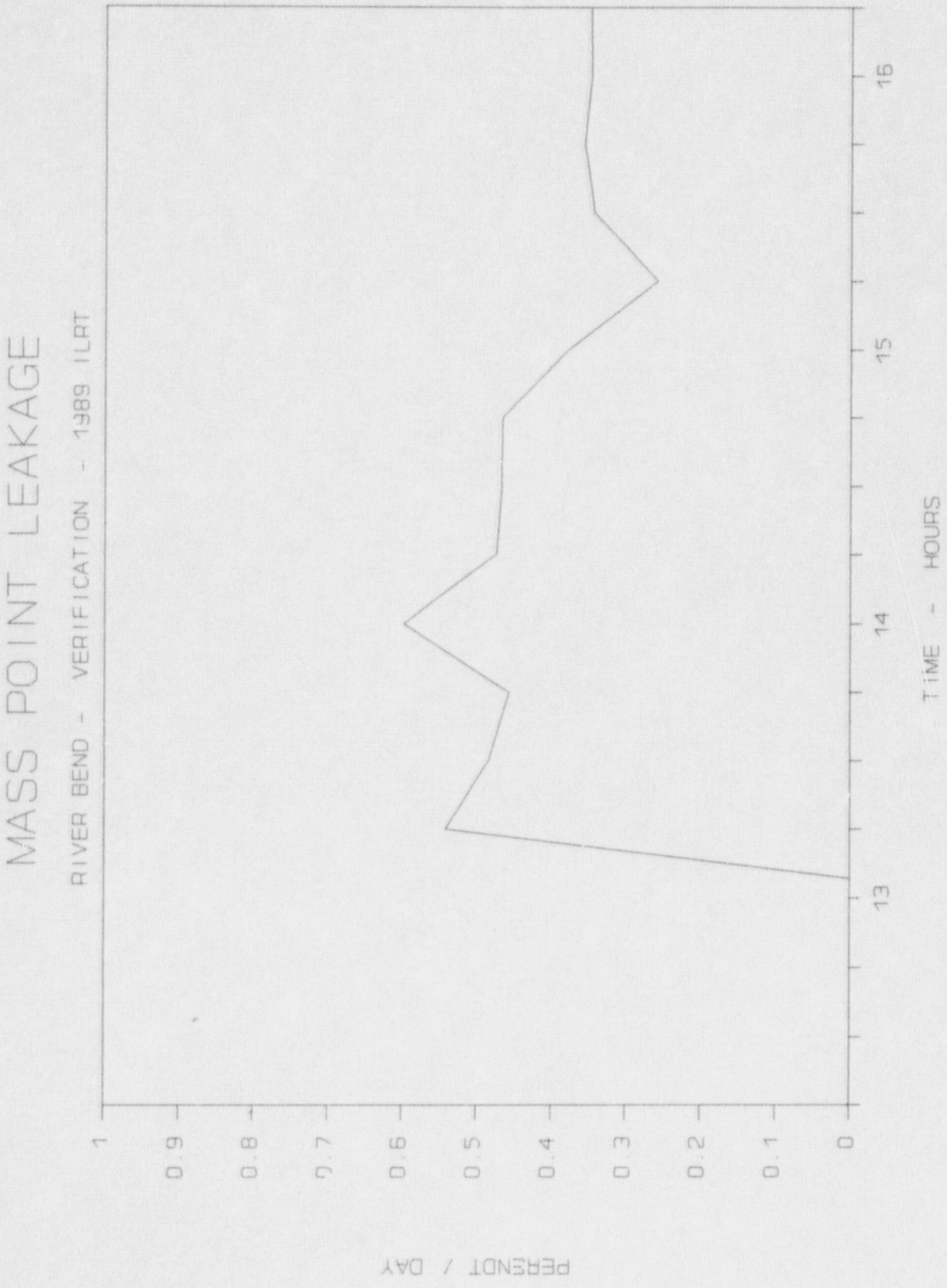
River Bend - 1989 ILRT
FROM 12:15 HOURS TO 16:15 HOURS ON 05/29/89
ABSOLUTE TEST METHOD, MASS POINT ANALYSIS TEST RESULTS
VERIFICATION TEST

Time (hh:mm)	Mass (LbM)	Leakage (PCT./DAY)	Confidence (PCT./DAY)	UCL (PCT./DAY)
12:15	156990.51	0.000000	0.000000	0.000000
12:30	156976.05	0.000000	0.000000	0.000000
12:45	157006.36	-0.484613	6.760260	6.275647
13:00	156992.06	-0.213804	1.136876	0.923071
13:15	156938.22	0.541517	1.153304	1.694821
13:30	156960.68	0.483753	0.687283	1.171036
13:45	156953.76	0.456632	0.460435	0.917067
14:00	156916.33	0.597989	0.366988	0.964977
14:15	156953.24	0.473669	0.308741	0.782410
14:30	156928.63	0.466626	0.241856	0.708483
14:45	156919.76	0.466225	0.194668	0.660894
15:00	156949.67	0.377725	0.185010	0.562735
15:15	156976.16	0.258381	0.198300	0.456681
15:30	156880.16	0.343692	0.190020	0.533712
15:45	156901.94	0.357258	0.164100	0.521357
16:00	156909.51	0.348248	0.143015	0.491263
16:15	156898.06	0.348965	0.125538	0.474503

ATTACHMENT 3.3Q
GRAPH 10



ATTACHMENT 3.3R
GRAPH 11



SECTION 4

LOCAL LEAKAGE RATE TESTS (TYPES B AND C)

Section 4 summarizes the results of the Local Leakage Rate Test's (LLRT's) data which has been obtained from periodic testing performed since the April 1985 Periodic Type A test. Maintenance data is provided for surveillance testing performed. Each penetration's leakage rate can be obtained from site reference material.

Attachment 4B contains an analysis of the containment penetrations that were repaired during the 1989 Refueling Outage to assess the as found containment condition.

The acceptance criteria for Types B and C testing are in accordance with 10CFR50, Appendix J. The combined as left leakage rate for all penetrations and valves, subject to Types B and C tests in 1989, were well below the acceptance criteria of less than $0.60L_a$.

The data contained in this section are listed below:

Attachment No.	Title
4A	Summary Local Leakage Rate Test Data
4B	1989 Local Leakage Rate Test Summary Analysis.

ATTACHMENT 4A

SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z3A	Feedwater Line	C	1B21*VF010A (IC)	NOTE 2/03-18-89	15.61/03-30-89	POST MAINTENANCE-MWO 127168 DISASSEMBLE AND REWORK
				33.36/09-22-87	33.36/09-22-87	
				66.87/11-08-86	66.87/11-08-86	
		C	1E12*MOVFO53A (OC)	0.0/04-01-89	0.0/04-01-89	
				0.11/10-28-87	0.11/10-28-87	
				7.87/11-06-86	7.87/11-06-86	
Z3B	Feedwater Line	C	1B21*VF010B (IC)	0.711/04-08-89	0.711/04-08-89	
				0.16/10-21-87	0.16/10-21-87	
				13.13/10-17-86	13.13/10-17-86	
				NONE	0.024/06-23-86	RETEST FOR RF
		C	1E12*MOVFO53B (OC)	0.19/04-19-89	0.19/04-19-89	
				0.00/10-25-87	0.00/10-25-87	
				25.48/10-28-86	25.48/10-28-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z6	Reactor Water Cleanup	C	1G33*MOVF040 (IC)		50.14/04-16-89	1.02/05-09-89	MWO 127123,127124-POST MAINTENANCE
					3.34/11-21-87	3.34/11-21-87	
					0.62/10-15-86	0.62/10-15-86	
		C	1G33*MOVF039(OC)		44.24/04-16-89	44.24/04-16-89	
					NONE	0.46/10-06-88	MWR 116174-POST MAINTENANCE PACKING REPLACED
					4.83/11-24-87	4.83/11-240-87	
					3.09/10-11-85	3.09/10-11-85	
Z7	Reactor Water Cleanup	C	1G33*MOVF001 (IC)		0.198/4-16-89	0.102/05-12-89	VALVE REPACKED-POST MAINTENANCE
					2.77/11-26-87	2.77/11-26-07	
					16.79/08-12-85	0.00/10-14-85	VALVE REWORKED
	Reac. Water Cleanup	C	1G33*MOVF004 (OC)		0.27/04-16-89	0.27/04-16-89	
					3.41/11-26-87	3.41/11-26-87	
					17.49/08-12-85	17.49/08-12-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z9	High Pressure Core Spray	C	1E22*MOVF004 (OC)	103.23/03-29-89	103.83/03-29-89	
				NONE	2.04/10-31-87	NO AS FOUND-POST MAINTENANCE TEST AFTER LIVE LOAD
				NONE	61.37/10-02-85	NO AS FOUND-POST MAINTENANCE-MWR 85-8664
	High Pres. Core Spray	C	1E22*AOVFOO5 (IC)	522.23/03-22-89	107.3/05-01-89	REWORKED-MWO 126282-POST MAINTENANCE
				0.47/09-28-87	354.84/10-08-87	POST MAINTENANCE TESTING AFTER LIVE LOAD
				NONE	512.9/10-03-85	NO AS FOUND-POST MAINTENANCE TEST AFTER MWR 85-8664
Z13	Low Pressure Core Spray	C	1E21*MOVF005 (OC)	3.00/03-22-89	3.00/03-22-89	
				52.02/10/27/87 2.17/10-01-85	52.02/10/22/87 2.17/10-01-87	
		C	1E21*AOVF006 (IC)	21.61/03-21-89 NOTE 3/10-07-87	21.61/03-21-89 43.70/11-12-87	VALVE REWORKED-MWR 111295
				NONE	124.9/10-01=85	NO AS FOUND-MWR 85-7120-POST MAINTENANCE

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z15	Reactor Core Isolation Cooling	C	1E51*MOVF063 (IC)		85.63/03-27-89	85.63/03-27-89	
					2.03/09-21-87	2.03/09-21-87	
					2.27/07-02-86	2.27/07-02-86	
		C	1E51*MOVF076 (IC)		0.00/03-29-89	00.0/03-29-89	
					0.00/09-21-87	0.00/09-21-87	
					NONE	1.07/12-05-87	NO AS FOUND-POST VALVE SIGNATURE TEST
					1.48/06-30-86	1.48/06-30-86	
					NONE	0.001/10-31-86	POST MAINTENANCE
		C	1E51*MOVF064 (OC)		0.00/03-27-89	1.99/04-14-89	POST LIVE LOAD
					20.34/09-21-87	20.34/09-21-87	
					NOTE 3/07-03-86	0.00/07-03-86	VALVE REWORKED-MWR 36400
Z17	Reactor Core Isolation Cooling	C	1E51*MOVF068 (OC)		51.66/03-27-89	51.66/03-27-89	
					6.76/09-18-87	6.76/09-18-87	
					2.26/07-04-86	2.26/07-04-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z18B/C	Reactor Core Isolation Cooling	C	1E51*MOVFO77 (OC)		13.48/03-28-89	13.48/03-28-89	
					0.00/09-18-87	0.00/09-18-87	
					0.00/06-28-86	0.00/06-28-86	
		C	1E51*MOVFO78 (OC)		13.48/03-28-89	13.48/03-28-89	
					20.85/09-20-87	20.85/09-20-87	
					11.89/06-29-86	11.89/06-29-86	
Z19	Reactor Core Isolation Cooling	C	1E51*MOVF013 (OC)		0.8237/03-23-89	0.8237/03-23-89	F013 AND F023 COMBINED TEST
					0.00/10-02-87	0.00/10-02-87	
					11.0/10-30-86	11.0/10-30-86	
	Reactor Core Isolation Cooling	C	1E12*MOVF023 (OC)		0.8237/03-23-89	0.8237/03-23-89	
					0.00/10-02-87	0.00/10-02-87	
					11.0/10-30-86	11.0/10-30-86	
	Reactor Core Isolation Cooling	C	1E51*AOVF065 (OC)		NOTE 2/03-23-89	42.2/05-04-89	REWORKED-MWO 12174,127107-POST MAINTENANCE
					0.10/10-05-87	0.28/11-7-87	POST MAINTENANCE TEST-MWR 1114010
					10.38/10-30-86	10.38/10-30-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
	Reactor Core Cooling Isolation	C	1E51*AOVF066 (IC)	NOTE 2/03-23-89	2.04/04-12-89	REWORKED-MWO 127174,127107-POST MAINTENANCE
				NOTE 2/10-05-87	94.33/11-03-87	VALVE REWORKED-MWR 111289
				NONE	170.39/10-16-85	NO AS FOUND-POST MAINTENANCE TEST- MWR 9715
Z20	Residual Heat Removal	C	1E12*MOVF009 (IC)	623.0/05-15-89	576.13/05-16-89	F009 AND V240 COMBINED TEST V240 ONLY
				NOTE 2/10-25-87	162.21/10-26-87	RESET TORQUE SWITCH-MWR 111385
				56.55/11-15-86	56.55/11-15-86	
	Residual Heat Removal	C	1RHS*V240 (IC)	623.0/05-15-89	576.13/05-16-89	REWORKED-MWO 122456-POST MAINTENANCE
				NOTE 2/10-25-87	162.21/10-26-87	
				56.55/11-15-86	56.55/11-15-86	
	Residual Heat Removal	C	1E12*MOVF008 (OC)	9.61/05-15-89	27.56/05-17-89	REWORKED-MWR 122456-POST LIVE LOAD
				0.03/10-25-87	0.03/10-25-87	
				10.17/11-14-86	10.17/11-14-86	
Z21A	Low Pressure Core Injection	C	1E12*MOVF027A (OC)	0.092/03-25-89	0.092/03-25-89	COMBINED TEST-F027A,42A,37A,99A AND 44A
				6.86/10-24-87	6.86/10-24-87	
				3.56/10-28-86	3.56/10-28-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C		1E12*MOVF042A (IC)	0.092/03-25-89	0.00/03-29-89	RETESTED POST LIVE LOAD PACKING
					6.86/10-24-87	6.86/10-24-87	
					3.56/10-28-86	3.56/10-28-86	
		C		1E12*MOVF037A (IC)	0.092/03-25-89	0.092/03-25-89	
					6.86/10-24-87	6.86/10-24-87	
					3.56/10-28-86	3.56/10-28-86	
		C		1E12*VF099A (IC)	0.092/03-25-89	0.092/03-25-89	
					6.86/10-24-87	6.86/10-24-87	
					3.56/10-28-86	3.56/10-28-86	
		C		1E12*VF044A (IC)	0.092/03-25-89	0.092/03-25-89	
					6.86/10-24-87	6.86/10-24-87	
					3.56/10-28-86	3.56/10-28-86	
Z21B	Low Pressure Core Injection	C		1E12*MOVF027B (OC)	0.03/04-19-89	0.03/04-19-89	COMBINED TEST-FO27B,42B,37B,99B,44B. POST MAINTENANCE TEST
					1.48/10-24-87	1.48/10-24-87	
					14.24/10-21-86	14.24/10-21-86	
		C		1E12*MOVF042B (IC)	5.01/3-25-89	5.01/03-25-89	
					1.48/10-24-87	0.01/11-01-87	RETEST POST LIVE LOAD PACKING
					14.24/10-21-86	14.24/10-21-86	
		C		1E12*MOVF037B (IC)	5.01/03-25-89	5.01/03-25-89	
					1.48/10-24-87	1.48/10-24-87	
					14.24/10-21-86	14.24/10-21-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1E12*VF099B (IC)	5.01/03-25-89	5.01/03-25-89	
				1.48/10-24-87	1.48/10-24-87	
				14.24/10-21-86	14.24/10-21-86	
		C	1E12*VF044B (IC)	5.01/03-25-89	5.01/03-25-89	
				1.48/10-24-87	1.48/10-24-87	
				14.24/10-21-86	14.24/10-21-86	
Z21C	Low Pressure Core Injection	C	1E12*MOVF042C (OC)	0.142/04-21-89	0.142/04-21-89	
				0.86/10-25-87	0.86/10-25-87	
				0.22/10-09-86	0.22/10-09-86	
		C	1E12*AOVF041C (IC)	37.6/05-09-89	37.6/05-09-89	
				75.26/03-22-87	72.71/10-09-87	POST LIVE LOAD AND ACTUATOR REMOVAL
				NONE	22.8/10-06-85	NO AS FOUND- VALVE REWORKED POST HYDRO FAILURE
Z26	Fuel Pool Cooling	C	1SFC*MOV119 (OC)	44.44/03-17-39	44.44/03-17-89	
				17.49/09-16-87	17.49/09-16-87	
				0.024/10-02-85	0.024/10-02-85	
		C	1SFC*V101 (IC)	4.9/03-17-89	4.9/03-17-89	
				0.52/09-16-87	0.52/09-16-87	
				NONE	0.06/02-19-87	NO AS FOUND- FAILED IST- NO VISIBLE PROBLEM WITH VALVE
				0.046/10-01-86	0.46/10-01-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z27	Fuel Pool Cooling	C	1SFC*MOV120 (IC)	4.63/03-17-89	4.63/03-17-89	MOV120 AND V350 COMBINED TEST
				2.56/09-16-87	2.56/09-16-87	
				11.8/10-02-85	11.8/10-02-85	
		C	1SFC*V350 (IC)	4.63/03-17-89	4.63/03-17-89	
				2.56/09-16-87	2.56/09-16-87	
				11.8/10-02-85	11.8/10-02-85	
		C	1SFC*MOV122 (OC)	4.47/03-17-89	4.47/03-17-89	
				47.29/09-16-87	47.29/09-16-87	
				22.2/10-02-85	22.2/10-02-85	
Z28	Fuel Pool Purification	C	1SFC*MOV139 (IC)	35.39/03-17-89	35.39/03-17-89	MOV139 AND V351 COMBINED TEST
				2.24/09-16-87	2.24/09-16-87	
				44.7/10-01-85	44.7/10-01-85	
		C	1SFC*V351 (IC)	35.39/03-17-89	35.39/03-17-89	
				2.24/09-16-87	2.24/09-16-87	
				44.7/10-01-85	44.7/10-01-85	
		C	1SFC*MOV121 (OC)	35.95/03-17-89	35.95/03-17-89	
				0.69/09-17-87	0.69/09-17-87	
				22.4/10-01-85	22.4/10-01-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z29	Control Rod Drive	C	1C11*VF122 (IC)		0.13/04-15-89	0.13/04-15-89	
					0.12/09-15-87	0.12/09-15-87	
					0.00/08-29-85	0.00/08-29-85	
		C	1C11*MOVFO83 (OC)		0.11/04-15-89	0.11/04-15-89	
					0.06/09-15-87	0.06/09-15-87	
					NONE	0.00/11-15-86	NO AS FOUND- PACKING TIGHTENED- POST MAINTENANCE TEST
					0.00/08-29-85	0.00/08-29-85	
					NONE	0.156/12-14-85	NO AS FOUND- POST MAINTENANCE TEST
Z31	Purge	C	1HVR*AOV165 (OC)		4.58/05-17-89	4.58/05-17-89	AOV165, M0V140 AND AOV123 COMBINED TEST
					1.34/12-14-88	1.34/12-14-88	
					1.26/09-15-88	1.26/09-15-88	
					0.54/06-09-88	0.54/06-09-88	
					1.88/02-20-88	1.88/02-20-88	
					6.41/11-24-87	6.41/11-24-87	
					1.75/06-20-87	1.75/06-20-87	
					NOTE 1/04-24-87	1.37/04-25-87	VALVE REWORKED- POST MAINTENANCE TEST
					3.10/01-13-87	3.10/01-13-87	
					3.08/10-04-86	3.08/10-04-86	
					3.12/07-01-86	3.12/07-01-86	
					15.0/03-26-86	0.366/04-03-86	
					2.47/01-29-86	0.68/01-31-86	UNABLE TO PRESSURIZE EXHAUST SIDE
					1.48/10-26-85	1.48/10-26-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1CCP*SOV140 (OC)	4.58/05-17-89	4.58/05-17-89	
				1.34/12-14-88	1.34/12-14-88	
				1.26/09-15-88	1.26/09-15-88	
				0.54/06-09-88	0.54/06-09-88	
				1.88/12-20-88	1.88/12-20-88	
				NONE	6.41/11-24-87	SOV140 INOPERABLE 10-04-86 TO 11-24-87
				3.12/07-01-86	3.12/07-01-86	
				15.0/03-26-86	0.366/04-03-86	
				2.47/01-29-86	0.68/11-31-86	
				1.48/10-26-85	1.48/10-26-85	
		C	1HVR*AOV123 (IC)	4.58/05-17-89	4.58/05-17-89	
				1.34/12-14-88	1.34/12-14-88	
				1.26/09-15-88	1.26/09-15-88	
				0.54/06-09-88	0.54/06-09-88	
				1.88/02-20-88	1.88/02-20-88	
				6.41/11-24-87	6.41/11-24-87	
				1.75/06-20-87	1.75/06-20-87	
				15.46/04-24-87	1.37/04-25-87	
				3.10/01-13-87	3.10/01-13-87	
				3.08/10-04-86	3.08/10-04-86	
				3.12/07-01-86	3.12/07-01-86	
				15.0/03-26-86	0.366/04-03-86	
				2.47/01-29-86	0.68/01-31-86	
				1.48/10-26-85	1.48/10-26-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z33	Purge	C	1HVR*AOV128 (IC)		8.9/05-17-89	8.9/05-17-89	AOV166, AOV128, MOV104 AND MOV105 COMBINED TEST
					14.34/12-15-88	14.34/12-15-88	
					14.14/09-15-88	14.14/09-15-88	
					12.20/06-10-88	12.20/06-10-88	
					38.09/02-20-88	38.09/02-20-88	
					5.83/11-23-87	5.83/11-23-87	
					5.4/06-28-87	5.4/06-28-87	
					NOTE 2/04-26-87	10.88/04-27-87	
					48.31/01-14-87	48.31/01-14-87	
					42.62/10-06-86	42.62/10-06-86	
					0.31/07-01-86	0.31/07-01-86	
					592.02/03-27-86	0.740/03-30-86	
					NOTE 2/01-29-86	0.62/02-01-86	
					6.77/10-20-85	6.77/10-20-85	
					81.77/06-15-85	81.77/06-15-85	
		C	1CCP*MOV104 (IC)		8.9/05-17-89	8.9/05-17-89	
					14.34/12-15-88	14.34/12-15-88	
					14.14/09-15-88	14.14/09-15-88	
					12.20/06-10-88	12.20/06-10-88	
					38.09/02-20-88	38.09/02-20-88	
					5.83/11-23-87	5.83/11-23-87	
					5.4/06-26-87	5.4/06-26-87	
					63.51/04-26-87	10.88/04-27-87	
					48.31/01-14-87	48.31/01-14-87	
					42.62/10-06-86	42.62/10-06-86	
					0.31/07-01-86	0.31/07-01-86	
					592.02/03-27-86	0.740/03-30-86	
					NOTE 2/01-29-86	0.62/02-01-86	
					6.77/10-20-85	6.77/10-20-85	
					81.77/06-15-85	81.77/06-15-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1CCP*MOV105 (IC)	8.9/05-17-89	8.9/05-17-89	
				14.34/12-15-88	14.34/12-15-88	
				14.14/09-15-88	14.14/09-15-88	
				12.20/06-10-88	12.20/06-10-88	
				38.09/02-20-88	38.09/02-20-88	
				5.83/11-23-87	5.83/11-23-87	
				5.40/06-26-87	5.40/06-26-87	
				63.51/04-26-87	10.88/04-27-87	
				48.31/01-14-87	48.31/01-14-87	
				42.62/10-06-86	42.62/10-06-86	
				0.31/07-01-86	0.31/07-01-86	
				592.07/03-27-86	0.74/03-30-86	
				6.77/10-20-85	6.77/10-20-85	
		C	1HVR*AOV166 (OC)	8.9/05-17-89	8.9/05-17-89	
				14.34/12-15-88	14.34/12-15-88	
				14.14/09-15-88	14.14/09-15-88	
				12.20/06-10-88	12.20/06-10-88	
				38.09/12-20-88	38.09/12-20-88	
				5.83/11-23-87	5.83/11-23-87	
				5.40/06-26-87	5.40/06-26-87	
				63.51/04-26-87	10.88/04-27-87	
				48.31/01-14-87	48.31/01-14-87	
				42.62/10-06-86	42.62/10-06-86	
				0.31/07-01-86	0.31/07-01-86	
				592.07/03-27-86	0.740/03-30-86	
				NOTE 2/01-29-86	0.62/02-01-86	
				6.77/10-20-85	6.77/10-20-85	
				81.77/06-15-85	81.77/06-15-85	
Z35	Floor Drain	C	1DFR*AOV102 (OC)	0.09/04-20-89	.09/04-20-89	POST MAINTENANCE
				0.65/10-28-87	0.65/10-28-87	
				2.95/09-18-85	2.95/09-18-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1DFR*AOV101 (IC)		125.6/04-20-89	4.47/05-14-89	AOV101 AND V180 COMBINED TEST
					0.83/10-28-87	0.83/10-26-87	
					433.03/09-18-85	433.03/09-18-85	
		C	1DFR*V180 (IC)		125.6/04-20-89	4.47/05-14-89	REWORKED-MWR 127130, V180 POST MAINTENANCE
					0.83/10-28-87	0.83/10-28-87	
					433.03/09-18-85	433.03/09-18-85	
Z38	Equipment Drain	C	1DER*AOV127 (OC)		0.00/04-20-89	0.00/04-20-89	REWORKED-MWR 127130,127131
					0.39/10-28-87	0.39/10-28-87	
					3.97/10-12-86	3.97/10-12-86	
		C	1DER*AOV126 (IC)		0.74/04-20-89	0.74/04-20-89	AOV126 AND V4 COMBINED TEST
					30.0/10-28-87	30.0/10-28-87	
					9.72/10-12-86	9.72/10-12-86	
		C	1DER*V4 (IC)		0.74/04-20-89	0.74/04-20-89	*
					30.0/10-28-87	30.0/10-28-87	
					9.72/10-12-86	9.72/10-12-86	
Z48	Component Cooling	C	1CCP*MOV138 (OC)		823.77/04-03-89	0.34/04-23-89	REWORKED-MWO 127180-POST MAINTENANCE
					4.00/09-17-87	4.00/09-17-87	
					NOTE 2/10-06-86	1.14/10-06-86	RESET TORQUE SW.

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1CCP*V118 (IC)		11.49/04-03-89 12.76/09-17-87 10.78/10-06-86	11.49/04-03-89 12.76/09-17-87 10.78/10-06-86	
Z49	Component Cooling	C	1CCP*MOV158 (IC)		2.03/04-03-89 1.23/09-18-87 5.80/10-06-86	2.03/04-03-89 1.23/09-18-87 5.80/10-06-86	MOV158/160 COMBINED TEST
		C	1CCP*V160 (IC)		2.03/04-03-89 1.23/09-18-87 5.80/10-06-86	2.03/04/03/89 1.23/09-18-87 5.80/10-06-86	
		C	1CCP*MOV159 (OC)		1.13/04-03-89 1.16/09-17-87 6.10/10-06-86	1.13/04-03-89 1.16/09-17-87 6.10/10-06-86	
Z52A	Service Water	C	1SWP*MOV507A (OC)		NOTE 2/04-08-89 609.69/10-04-87 29.47/09-11-85	87.26/04-26-89 0.08/10-30-87 29.47/09-11-85	REWORKED VALVE-MWO 127189 VALVE REWORKED
		C	1SWP*V174 (IC)		NOTE 2/04-08-89 NOTE 3/10-04-87 259.25/09-11-85	133.2/04-26-89 0.05/10-14-87 259.25/09-11-85	REWORKED-MWO 127190-POST MAINTENANCE VALVE REWORKED
Z52B	Service Water	C	1SWP*507B (OC)		NOTE 3/03-22-89 NOTE 2/10-14-87 42.30/10-02-85	69.16/03-26-89 5.90/10-18-87 42.30/10-02-85	REWORKED-MWO 127172,-POST MAINTENANCE VALVE REWORKED

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1SWP*V175 (IC)	NOTE 3/03-22-89	177.97/03-27-89	REWORKED-MWO 127102
				35.85/10-14-87	35.85/10-14-87	
				1.88/07-01-86	1.88/07-01-86	
				1.34/09-18-85	1.34/09-18-85	
Z53A	Service Water	C	1SWP*MOV81A (OC)	414.00/04-19-89	0.00/05-21-89	REWORKED-MWO R127133- POST MAINTENANCE
				NOTE 2/10-06-87	22.02/10-29-87	VALVE REWORKED
				1.00/10-14-85	1.00/10-14-85	
		C	1SWP*MOV5A (IC)	11.70/04-18-89	11.70/04-18-89	
				0.00/10-28-87	0.00/10-28-87	
				6.31/10-14-85	6.31/10-14-85	
		C	1SWP*MOV503A (IC)	0.081/04-19-89	0.081/04-19-89	
				0.76/10-28-87	0.76/10-28-87	
				2.19/10-14-85	2.19/10-14-85	
		C	1SWP*SOV522A (IC)	39.66/04-19-89	15.66/04-29-89	SOV522A/C COMBINED- POST MAINTENANCE
				37.43/10-28-87	37.43/10-28-87	
				35.24/10-12-86	35.24/10-12-86	
		C	1SWP*SOV522C (IC)	39.66/04-19-89	15.66/04-29-89	
				37.43/10-28-87	37.43/10-28-87	
				35.24/10-12-86	35.24/10-12-86	
Z53B	Service Water	C	1SWP*MOV81B (OC)	NOTE 3/04-19-89	.07/05-08-89	REWORKED-MWO 127138- POST MAINTENANCE
				76.28/10-28-87	76.28/10-28-87	
				0.00/10-14-85	0.00/10-14-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1SWP*MOV5B (IC)	11.70/04-18-89 73.22/10-28-87 1.14/10-14-85	11.70/04-18-89 73.22/10-28-87 1.14/10-14-85	COMBINED
		C	1SWP*MOV503B (IC)	0.025/04-19-89 1.28/10-28-87 4.35/10-14-85	0.025/04-19-89 1.28/10-28-87 4.35/10-14-85	
		C	1SWP*SOV522B (IC)	60.21/04-19-89 995/10-28-87 34.07/10-12-86	3.63/05-01-89 10.17/11-03-87 34.07/10-12-86	SOV522B/D COMBINED TEST-POST MAINTENANCE
		C	1SWP*SOV522D (IC)	60.21/04-19-89 995./10-28-87 34.07/10-12-86	3.63/05-01-89 10.17/11-03-87 34.07/10-12-86	*
Z102	ADS Air	C	1SVV*MOV1B (OC)	3.81/03-27-89 5.26/09-24-87 10.53/10-06-86	3.81/03-27-89 5.26/09-24-87 10.53/10-06-86	
		C	1SVV*V9 (IC)	2.24/03-27-89 3.41/09-24-87 2.87/10-06-86	2.24/03-27-89 3.41/09-24-87 2.87/10-06-86	
Z103	ADS Air	C	1SVV*MOV1A (OC)	0.58/04-02-89 0.00/09-20-87 1.95/10-06-86	0.58/04-02-89 0.00/09-20-87 1.95/10-06-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		C	1SVV*V31 (IC)		46.27/03-31-89	9.76/04-01-89	REWORKED-MWR 127176-POST MAINTENANCE
					48.31/09-20-87	16.73/09-24-87	VALVE REWORKED
					29.04/10-06-86	29.04/10-06-86	
Z129	Reactor Water Cleanup	C	1G33*MOVF054 (OC)		0.57/04-16-89	0.57/04-16-89	
					11.95/09-19-87	11.95/09-19-87	
					0.448/08-12-85	0.448/08-12-85	
		C	1G33*MOVF053 (IC)		0.52/04-16-89	0.52/04-16-89	
					11.95/09-18-87	11.95/09-18-87	
					2.03/10-30-86	2.03/10-30-86	
Z601B	Reactor Plant Sampling	C	1SSR*SOV130 (IC)		1.90/03-26-89	0.82/04-17-89	REWORKED-MWR 12178-POST FLUSH ONLY
					0.24/10-28-87	0.24/10-28-87	
					0.55/10-12-86	0.55/10-12-86	
		C	1SSR*SOV131 (OC)		1.95/03-26-89	0.194/04-17-89	REWORKED-MWR 12177-POST FLUSH ONLY
					0.00/10-28-87	0.00/10-28-87	
					0.59/10-12-86	0.59/10-12-86	
Z601E	Sampling	C	1CMS*SOV35D (IC)		14.34/04-09-89	0.45/04-28-89	REWORKED-MWO 127191-VALVE ROTATED
					0.40/10-06-87	0.00/10-06-87	
					183.07/10-06-86	0.00/11-10-86	VALVE REWORKED
		C	1CMS*SOV31B (OC)		100.17/04-09-89	3.00/05-15-89	REWORKED-MWO 127192-POST MAINTENANCE
					NOTE 2/10-06-87	0.24/11-08-87	
					2.03/10-06-86	2.03/10-06-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z601F	Sampling	C	1CMS*SOV31D (OC)		0.00/04-09-89	0.00/04-09-89	
					0.03/10-06-87	0.03/10-06-87	
					4.22/10-06-86	4.22/10-06-86	
		C	1CMS*SOV35B (IC)		0.00/04-09-89	0.00/04-09-89	
					0.00/10-14-87	0.00/10-14-87	
					849.26/10-07-86	0.01/11-14-86	VALVE REWORKED
Z503A	Leakage Monitoring	C	1LMS*V14 (IC)		0.09/04-09-89	0.09/04-09-89	
					0.15/10-06-87	0.15/10-06-87	
					2.13/10-07-86	2.13/10-07-86	
		C	1LMS*V12 (OC)		0.08/04-09-89	0.08/04-09-89	
					0.11/10-06-87	0.11/10-06-87	
					2.10/10-07-86	2.10/10-07-86	
Z603C	Leakage Monitoring	C	1LMS*V7 (IC)		0.00/04-09-89	0.00/04-09-89	
					0.15/10-06-87	0.15/10-06-87	
					0.10/10-07-86	0.10/10-07-86	
		C	1LMS*V16 (OC)		12.20/04-09-89	3.23/04-23-89	POST MAINTENANCE-MWP 127193
					14.04/10-06-87	14.04/10-06-87	
					1.00/10-07-86	1.00/10-07-86	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z605E	Sampling	C	1CMS*SOV35C (IC)	0.16/04-09-89	0.16/04-09-89	
				2.34/10-07-87	0.03/11-04-87	VALVE REWORKED
				11.34/10-09-87	0.625/11-22-86	VALVE REWORKED
		C	1CMS*SOV31A (OC)	0.00/04-09-89	0.00/04-09-89	
				62.8/10-09-87	0.06/11-16-87	VALVE REWORKED
				0.33/11-10-86	11.95/11-22-86	VALVE REWORKED
Z605F	Sampling	C	1CMS*SOV31C (OC)	0.426/04-09-89	0.426/04-09-89	
				2.17/10-09-87	0.21/11-06-87	VALVE REWORKED
				0.76/10-07-86	0.76/10-07-86	
		C	1CMS*SOV35A (IC)	0.52/04-09-89	0.52/04-09-89	
				2.18/10-07-87	0.12/11-06-87	VALVE REWORKED
				172.9/10-06-86	2.47/10-10-86	VALVE REWORKED

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
			TYPE B TESTS			
CRD		B	CRD HATCH	0.016/05-16-89	0.016/05-16-89	
				0.00/03-24-89	0.00/03-24-89	
				0.00/03-21-89	0.00/03-21-89	
				0.006/11-19-88	0.006/11-19-88	
				0.02/11-01-86	0.02/11-01-86	
				0.00/02-23-86	0.00/02-23-86	
				0.00/10-06-85	0.00/10-06-85	
				0.024/03-31-85	0.024/03-31-85	
DRA7		B	EQUIPMENT HATCH	0.00/05-24-89	0.00/05-24-89	
				0.00/03-18-89	0.00/03-18-89	
				0.00/03-16-89	0.00/03-16-89	
				0.28/11-23-87	0.28/11-23-87	
				0.03/06-23-87	0.03/06-23-87	
				0.0356/11-24-86	0.0356/11-24-86	
				0.203/04-05-86	0.203/04-05-86	
				0.412/12-13-85	0.412/12-13-85	
				0.76/10-06-85	0.76/10-06-85	
				0.024/03-30-85	0.024/03-30-85	
FUEL TRANS. TUBE		B	BLIND FLANGE	3.05/05-19-89	3.05/05-19-89	
				0.61/11-22-87	0.61/11-22-87	
				0.178/12-13-85	0.178/12-13-85	
				0.153/10-27-85	0.153/10-27-85	
				0.0/10-06-85	0.0/10-06-85	
				0.024/03-24-85	0.024/03-24-85	
				0.024/12-29-84	0.024/12-29-84	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
		B	UPPER BELLOWS	0.00/01-14-89	0.00/01-14-89	
				0.36/11-22-87	0.36/11-22-87	
				0.00/10-06-85	0.00/10-06-85	
				0.024/12-29-84	0.024/12-29-84	
		B	LOWER BELLOWS	0.0/04-14-89	0.0/04-14-89	
				0.11/11-22-87	0.11/11-22-87	
				0.00/10-06-85	0.00/10-06-85	
				0.024/12/29/84	0.024/12-29-84	
RAK1	ELECTRICAL PENETRATIONS	B		7.45/09-24-87	7.45/09-24-87	
				1.923/10-10-85	1.923/10-10-85	
RAK2		B		0.00/12-09-87	0.00/12-09-87	
				0.00/09-24-87	0.00/09-24-87	
				0.198/10-10-85	0.198/10-10-85	
RAK3		B		0.00/12-09-87	0.00/12-09-87	
				0.00/10-25-87	0.00/10-25-87	
				0.00/10-11-85	0.00/10-11-85	
RAK4		B		0.00/09-24-87	0.00/09-24-87	
				0.00/10-10-85	0.00/10-10-85	
RAK5		B		0.00/10-25-87	0.00/10-25-87	
				1.424/10-10-85	1.424/10-10-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
DRA1		B	AUX. BLDG. AIRLOCK	0.00/05-23-89	0.00/05-23-89	
				0.532/03-15-89	0.532/03-15-89	
				2.23/10-07-88	2.23/10-07-88	POST MAINTENANCE LINKAGE
				0.00/07-27-88	0.00/07-27-88	POST MAINT. MW0 116821,SEALS
				0.91/06-02-88	0.91/06-02-88	
				0.00/12-14-87	0.00/12-14-87	
				0.15/06-25-87	0.15/06-25-87	
				0.43/01-15-87	0.43/01-15-87	
				0.00/11-23-86	0.00/11-23-86	
				0.365/08-21-86	0.365/08-21-86	
				0.617/04-02-86	0.617/04-02-86	
				0.00/02-24-86	0.00/02-24-86	POST MAINT. MWO 6815 SEALS
				6.90/10-29-85	6.90/10-29-85	
				3.384/08-19-85	3.384/08-19-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name	Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
DRA2		B	FUEL BLDG. AIRLOCK	0.00/05-28-89	0.00/05-28-89	
				0.00/03-14-89	0.00/03-14-89	
				0.4883/10-08-88	0.4883/10-08-88	POST MAINT. LINKAGE
				0.00/09-01-88	0.00/09-01-88	POST MAINT. MWO 120039 SEALS
				2.84/06-02-88	2.84/06-02-88	
				5.69/12-14-87	5.69/12-14-87	
				0.00/06-25-87	0.00/06-25-87	
				1.07/05-27-87	1.07/05-27-87	
				0.00/01-14-87	0.00/01-14-87	
				0.6824/08-21-86	0.6824/08-21-86	
				0.00/07-04-86	0.00/07-04-86	POST MAINT. LINKAGE MWO 42561
				0.925/04-07-86	0.925/04-07-86	
				0.478/02-28-86	0.478/02-28-86	MWO 17704, SEALS LINKAGE POST MAINT.
				0.369/02-24-86	0.369/02-24-86	POST MAINT. MWO 6816 SEALS
				3.21/01-12-86	3.21/01-12-86	
				1.86/12-14-85	1.86/12-14-85	
				6.24/10-29-85	6.24/10-29-85	
				4.97/08-19-85	4.97/08-19-85	
Z1A		B	BELLOWS	0.00/04-22-89	0.00/04-22-89	
				0.00/10-18-86	0.00/10-18-86	
				0.00/01-19-85	0.00/01-19-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z1B		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.15/10-29-87	0.15/10-29-87	
					0.061/10-18-86	0.061/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
ZIC		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.051/10-30-87	0.051/10-30-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
ZID		B	BELLOWS		0.00/04-22-89	0.00/04-22-89	
					0.04/10-30-87	0.04/10-30-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z2		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.2/10-29-87	0.2/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z3A		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.285/10-29-87	0.285/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z3B		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.15/10-29-87	0.15/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00-01-19-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z6		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.12/10-29-87	0.12/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z7		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.188/10-29-87	0.188/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z9		B	BELLOWS		0.025/04-22-89	0.025/04-22-89	
					1.02/10-27-87	1.02/10-27-87	
					0.00/10-16-86	0.00/10-16-86	
					0.00/01-19-85	0.00/01-19-85	
Z13		B	BELLOWS		0.00/04-22-89	0.00/04-22-89	
					1.02/10-27-87	1.02/10-27-87	
					0.00/10-16-86	0.00/10-16-86	
					0.00/01-19-85	0.00/01-19-85	
Z15		B	BELLOWS		0.001/04-22-89	0.00/04-22-89	
					0.056/10/30/87	0.056/10-30-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z19		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.25/10/30/87	0.25/10-30-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	

ATTACHMENT 4A
SUMMARY LOCAL LEAKAGE RATE TEST DATA

Pen No.	System Name		Test Type	Equipment/ Valves (Note 1)	As found leakage (SCFD) / date	As left leakage (SCFD) / date	Remarks
Z20		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					3.7/10-29-87	3.7/10-29-87	
					0.00/10-18-86	0.00/10-18-86	
					0.00/01-19-85	0.00/01-19-85	
Z21A		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					1.02/10-27-87	1.02/10-27-87	
					0.00/10-16-86	0.00/10-16-86	
					0.00/01-19-85	0.00/01-19-85	
Z21B		B	BELLOWS		0.025/04-22-89	0.025/04-22-89	
					1.02/10-27-87	1.02/10-27-87	
					0.00/10-16-86	0.00/10-16-86	
					0.00/01-19-85	0.00/01-19-85	
Z21C		B	BELLOWS		0.025/04-22-89	0.025/04-22-89	
					1.02/10-27-87	1.02/10-27-87	
					0.00/10-16-86	0.00/10-16-86	
					0.00/01-19-85	0.00/01/19-85	
Z129		B	BELLOWS		0.001/04-22-89	0.001/04-22-89	
					0.12/10-29-87	0.12/10-29-87	
					0.00/10-18-86	0.00/10-18-86	

NOTE 1 IC = INSIDE CONTAINMENT
OC = OUTSIDE CONTAINMENT

NOTE 2 UNABLE TO PRESSURIZE

NOTE 3 LEAK RATE EXCEEDED HIGH RANGE METER (>1017 SCFD)

ATTACHMENT 4B
1989 LOCAL LEAKAGE RATE SUMMARY ANALYSIS

Attachment 4A was reviewed for the as found LLRT, the repair, and the as left LLRT for each boundary or penetration. The net leakage contribution for each penetration was determined using the following criteria and is summarized on the next page.

1. A leakage equivalent to the repair improvement achieved on each valve in the penetration is calculated.

2. Only those penetrations where repairs were performed and the as-left leakage rate is lower than the as-found leakage rate are included in this attachment.

3. The leakage equivalent is the difference between the as found and the as left leakage rates.

4. If a repair was not performed, a zero leakage equivalent is assessed to the valve.

5. The leakage equivalent assessed to a penetration may be reduced due to the safety-related service of the system associated with the penetration(s). Justification for this reduction will be provided with the analysis.

6. The net equivalent leakage for the penetration is the lowest of the inside or outside valve grouping (e.g., simulates minimum pathway leakage). The inside barrier may be inside the containment or the inner most barrier of the two barriers outside the containment. See Attachment 4A.

7. If the as left leakage rate of a repaired valve is lower than the as left leakage rate of a valve that didn't require a repair, then the penetration net equivalent leakage is the difference between the as left leakage rates, or the repair improvement of the reworked valve.

8. For series valves tested together (i.e. combination test), the penetration net equivalent leakage is half the difference between the as found and the as left leakage rates when both valves are repaired at the same time (prior to performing another test).

9. When the summation of the leakage equivalent and the leakage measured during a successful Type A test is greater than L_a, the penetration(s) with excessive leakage(s) shall be analyzed under a failure analysis program.

10. All leakage rate values are in SCFD.

Conclusions:

The results of the analysis were indeterminate because some of the as found leakage rates exceeded the range of the instrumentation used for the LLRTs.

ATTACHMENT 4B
1989 LOCAL LEAKAGE RATE SUMMARY ANALYSIS

Pen Num.	System	As found	As left	LS	Remarks
Z3A	Feedwater	*	0.00	0.00	
Z6	Reactor Water Cleanup	49.12	0.00	0.00	
Z7	Reactor Water Cleanup	0.096	0.00	0.00	
Z9	HPCS	414.93	0.00	0.00	
Z15	RCIC	0.00	0.00	0.00	
Z19	RCIC	*	*	*	Indeterminate
Z20	RHR	46.87	0.00	0.00	Combined
Z21A	LPCI	0.092	0.00	0.00	Combined
Z35	Floor Drain	121.13	0.00	0.00	Combined
Z38	Equipment Drain	0.00	0.00	0.00	Combined
Z48	Component Cooling	0.00	823.43	0.00	
Z52A	Service Water	*	*	*	Indeterminate
Z52B	Service Water	*	*	*	Indeterminate
Z53A	Service Water	24.0	414.0	51.44	Combined
Z53B	Service Water	56.58	*	*	Indeterminate
Z103	ADS Air	36.51	0.00	0.00	
Z601B	Reactor Plant Sampling	1.08	1.756	1.706	
Z601E	Reactor Plant Sampling	13.89	97.17	13.89	
Z603C	Leakage Monitoring	0.00	8.97	0.00	

* Leakage rate exceeded the range of the test equipment